

Annual Return of Statistics relating to Forest Administration in British India for the year 1928-29

**(With which is incorporated
the Quinquennial Review,
ending 31st March 1929)**



**CALCUTTA: GOVERNMENT OF INDIA
CENTRAL PUBLICATION BRANCH
1930**

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AGENT IN PALESTINE :—Steimatzky, Jerusalem.

| | PAGES. |
|---|--------|
| Quinquennial Review of Forest Administration in British India, ending 31st March 1929 | 1—16 |

STATEMENTS.

| | | |
|-----------|---|-------|
| STATEMENT | I.—Area of forests under the control of the Forest Department . | 17 |
| " | II.—Progress of forest settlements | 18 |
| " | III.—Demarcation and maintenance of boundaries | 19 |
| " | IV.—Forest areas surveyed and under survey | 20—21 |
| " | V.—Progress in working plans | 22 |
| " | VI.—Expenditure on communications and buildings | 23 |
| " | VII.—Breaches of forest rules, | 24—25 |
| " | VIII.—Area protected from fire | 26 |
| " | IX.—Causes of forest fires | 27 |
| " | X.—Area closed and open to grazing | 28 |
| " | XI.—Protection from cattle | 30—31 |
| " | XII.—Progress on reproduction and afforestation | 32 |
| " | XIII.—Outturn of forest produce | 33 |
| " | XIV.—Forest produce removed by different agencies | 34—35 |
| " | XV.—Exports of forest produce | 36 |
| " | XVI.—Value of forest produce given away free or at reduced rates . | 37 |
| " | XVII.—Details of revenue and expenditure (excluding Burma and Fed. Shan States). | 38 |
| " | XVII (a).—Details of revenue and expenditure (Burma and Fed. Shan States only). | 39 |
| " | XVIII.—Summary of revenue and expenditure | 40—41 |
| " | XIX.—Revenue, expenditure and surplus during the 30 years from 1899-1900 to 1928-29 | 42—47 |

APPENDIX.

1. Area under the control of the Forest Department compared with the total area of British India (including the Shan States).
2. Growth of forest revenue and expenditure by quinquennial periods since 1864-69.
3. Diagram showing annual forest revenue, expenditure and surplus for the 10 years 1919-20 to 1928-29.

QUINQUENNIAL REVIEW.

Constitution of the Forests.

The following review of Forest Administration in British India during the five years ending the 31st March 1929 is published for general information.

Forest Area.—At the close of the quinquennial period under review the forest areas in British India, including the Shan States, amounted to 249,822 square miles, of which 106,849 square miles are reserved, 6,308 square miles protected, and 136,665 square miles unclassified State forests, the whole representing 22·7 per cent. of the total area of British India (with the Shan States) or taking into account only reserved and protected forests, 10·2 per cent.

2. *Forest Surveys.*—The area surveyed by the Survey of India amounted to 7,198 square miles, and 750 sheets were published. The cost debited to the Forest Department on account of mapping and publishing and the cost of special surveys, etc., amounted to Rs. 11,47,660 as compared with a sum of Rs. 11 lakhs during the previous period.

Organisation.

3. *Administration and control.*—The appointment of Inspector General of Forests was held by Sir Peter Clutterbuck until the end of March 1926, when he proceeded on leave preparatory to retirement. On the 1st of April Mr. (now Sir Alexander) Rodger assumed charge of the double post of Inspector General of Forests and President, Forest Research Institute and College, and held this post until the end of the period under report except for 8 months in 1927 when he was on leave and Mr. H. S. Tireman, Chief Conservator of Forests, Madras, officiated. This arrangement was sanctioned by the Secretary of State in October 1926.

During the period now being reported on, the Inspector General of Forests visited Burma, Assam, Bengal, Madras, Coorg, the Central Provinces, Bombay, Punjab, Hazara, Bihar and Orissa, the United Provinces, the North-West Frontier Province, the Andamans, and Kashmir. An important step was taken by the Inspector General of Forests in March 1927 when at the request of the Chief Commissioner he visited a number of forests in the North-West Frontier Province and made proposals for the establishment of a proper Forest Department which would take charge of all the forests of which the Government of India could get control west of the Indus. Owing to financial stringency these proposals were not accepted until April 1930, but in that month an officer was appointed to hold charge of Conservator of the new circle. It is anticipated that these measures will lead to a great advance in forest conservation not only in the North-West Frontier Province itself but in tribal areas such as Chitral, Swat and Kohistan.

During the whole of the period under review "forests" were a transferred subject in the provinces of Burma and Bombay.

The peculiar circumstances of Burma have led to very little, if any, deterioration in the management of the very large and valuable forest estate which exists in Burma. A new service has been organised and the Government of Burma have made their own rules for recruitment and payment of the forest staff.

A further consequence of the "transfer" was separation of the administration of the forests in the Federated Shan States from that of the forests in the rest of Burma. In the Federated Shan States the Commissioner replaces the Chief Conservator of Forests as head of the Department; but the gazetted staff continues on the same cadre with that of Burma and the services of the Working Plans Circle are used for the control of forest management.

Recruitment and training.

4. (a) *Indian Forest Service*.—As a result of the recommendations of the Lee Commission it was decided that recruitment in future should be on the following basis—

75 per cent. Indians and 25 per cent. Europeans

On the 1st November 1926 the new Indian Forest Service College at Dehra Dun was opened and the following students were trained and allotted to provinces and States between that date and July 1930. (This includes students still under training).

| Year. | No. of students trained. | Allotted to |
|---------|---|--------------------------------------|
| 1926-28 | 2 (Government) | Madras. |
| | 1 do. | Punjab. |
| | 2 | Tehri State. |
| | 6 (Private). | |
| | 1 (Extra Assistant Conservator from Assam). | |
| | <hr/> 12 | |
| 1927-29 | 3 (Government). | Central Provinces, Madras and Assam. |
| | 2 | Mandi & Kashmir State. |
| | 1 (Private) | |
| | <hr/> 0 | |
| 1928-30 | 4 (Government) | |
| | 1 | Baroda State. |
| | <hr/> 5 | |

The future of the Indian Forest Service College at Dehra Dun is a matter of considerable uncertainty. As a result of the transfer of forests in two provinces, Bombay and Burma, the number of students who have been annually recruited for training at Dehra Dun has been very small. In certain provinces, for example in the Punjab and the United Provinces, the gazetted forest staff has been larger than the local Governments had any need for and this has led to a considerable reduction in the number of recruits who have been trained at Dehra Dun up to date. It was hoped that students would be sent for training at Dehra Dun from other parts of the Empire, such as the Malay States, South Africa, Kenya and Uganda, but up to date there has been no response to the letters sent to these parts of the Empire regarding the opportunities for scientific training available at Dehra Dun. Although the course is expensive it has not been found possible to run the College at a profit owing to the very small number of students who have been sent up for training. During the 5 years under review the following numbers of Europeans have been recruited by the Secretary of State for India and have been sent to India to the provinces named—

| Province. | No. of recruits. |
|-----------------------------|------------------|
| Madras | 4 |
| Burma | 15 |
| Central Provinces | 3 |
| Total | <hr/> 22 |

A feature of the five-year-period under review is the number of Indian students who have gone to the Universities in England and Scotland for training at their own expense with a view to obtaining appointment in the Indian Forest Service on return to India. It has been found possible to give appointments to very few of these officers, and it is to be hoped that Indian students will avoid this method of trying to get into the Indian Forest Service in the future as it is practically certain to lead to disappointment.

The first examination for the Indian Forest Service was held in Allahabad in August 1926 by the Inspector General of Forests and the examinations of 1927 and 1928 were held at Delhi by the Public Service Commission. The number of recruits appointed at these competitive examinations was as follows—

| | | | | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|---|---|---|---|
| 1926 | . | . | . | . | . | . | . | . | . | . | . | 2 |
| 1927 | . | . | . | . | . | . | . | . | . | . | . | 3 |
| 1928 | . | . | . | . | . | . | . | . | . | . | . | 4 |

The total number of officers in the Indian Forest Service in March 1929 was as follows—

| | | | | | | | | | | | |
|---------------|---|---|---|---|---|---|---|---|---|---|-----|
| (1) Europeans | . | . | . | . | . | . | . | . | . | . | 230 |
| (2) Indians | . | . | . | . | . | . | . | . | . | . | 90 |
| (3) Burmese | . | . | . | . | . | . | . | . | . | . | 3 |

(b) *Provincial Forest Service.*—On the 31st March 1928, the last Provincial Forest Service students left Dehra Dun and since then the College has consisted of two branches namely the I. F. S. College and the old established Rangers College. Each province is now making its own arrangements for recruiting Provincial Forest Service officers.

(c) *Training of Rangers.*—During the five-year-period the Rangers College at Dehra Dun has continued to train rangers not only for the provinces of Upper India but for Kashmir and other Indian States. The number of students who obtained certificates were as follows :—

| | | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|---|----|
| 1925 | . | . | . | . | . | . | . | . | . | 16 |
| 1926 | . | . | . | . | . | . | . | . | . | 20 |
| 1927 | . | . | . | . | . | . | . | . | . | 16 |
| 1928 | . | . | . | . | . | . | . | . | . | 17 |
| 1929 | . | . | . | . | . | . | . | . | . | 15 |

Ranger students for Madras, Bihar and Orissa, the Central Provinces and parts of Southern India were trained at the Forest College at Coimbatore.

5. *Forest Engineering Service.*—As noted in the Quinquennial Review published five years ago, the Secretary of State for India sanctioned the formation of a Forest Engineering Service in 1919. It was hoped at that time that this service would develop into a useful organization, but these hopes have been falsified. With few exceptions it was found that there was little or no work of the special nature for which these officers were trained in the various provinces to which they were posted, and the result has been that a number of them have been or are being transferred from the Forest Engineering Service to the Provincial Forest Departments. No recruitment for this service has taken place since the year 1922.

In addition to the regular Forest Engineering Service a number of temporary Forest Engineers mostly from the United States of America were employed on special duty, mainly in Madras, but it has been found that it has been impracticable to give these officers work on such a scale as to justify the heavy expense of paying their salaries, and their services have now for the most part been dispensed with.

Conservation and Improvement.

6. *Fire protection.*—The area over which special fire protection was attempted shows a decrease of about one per cent. in 1928-29 as compared with the figure for 1923-24. It will be noted from the report for the last 5-year-period that considerable decrease took place in the area under fire protection. This decrease is still going on and the policy of most of the Forest Departments is to spend less money on fire protection as it has been found that in many parts fire protection does more damage to the forests of India than good. The percentage of forest protected during each of the five years under report was almost exactly 40 per cent. and the percentage of failure to area attempted has varied

during the same period from 1 per cent. in 1928-29 to 10 per cent. in 1924-25. The percentage of burnt areas must of course vary with the season as in very hot dry seasons, for example in the United Provinces in 1929, the areas burnt show a very considerable increase.

7. *Grazing*.—During the year 1928-29 over 14,170,000 animals were provided with grazing in State forests of all classes and out of this number no less than 4,880,000 grazed free. The figures for 1923-24 were 13,300,000 (4,800,000 free) and for 1918-19 were 13,300,000 (5,300,000 grazed free). Except in Burma the damage done to the forests by excessive grazing is one of the most important problems with which the Forest Department has to deal. This matter was brought very particularly to the notice of the Royal Commission on Agriculture and it was proposed that the officers of the Forest Department should endeavour to deal in a more scientific manner with the grazing problem. Forest officers will probably be sent to certain Agricultural Colleges and other Institutions where they may learn something of the different varieties of grass which provide useful fodder for animals. Undoubtedly, however, little progress will be made in India until it is realised that grazing should be scientifically utilised. Forest areas should be opened in rotation and more use should be made of cut fodder as, at present, the cattle trample more grass than they eat. In parts of India the public have shown little conception of the damage that is done to their own grazing grounds, both in and outside the forests, by the excessive number of useless cattle that are kept, and little progress can be looked for in this respect until the villagers learn to keep a few good cattle instead of very many useless animals.

8. *Afforestation*.—Good progress has been made in the important work of afforesting denuded ravine lands in the United Provinces. During the quinquennium the area of plantations increased from 10,000 acres to more than 16,000 acres. In the Punjab 1,171 acres had been reclaimed up to the end of 1928-29. A forest officer was put on special duty in the Punjab to deal with the problem of denudation of some of the hilly dry tracts and it is hoped that the great progress which has been made, for example in the Pabbi hills, will be extended to other parts of the Punjab, where excessive grazing has resulted in very serious damage not only to the growth on the ground but to cultivated areas lower down where floods from the barren hills destroy the villagers' fields.

The following extract is taken from the Review of Forest Administration in the United Provinces for the quinquennium :—

"But the change of policy has been relatively more important than mere territorial expansion. Previously the main object was the afforestation (with tree growth) of waste ravine lands in Agra, Etawah and Jalaun districts for commercial and protective purposes. It became obvious, however, that such tracts are not only the most difficult in the province to afforest (in some cases it is probably impossible), but that mostly they offer little or no prospect of a financial return. Therefore during the last 2 years there has been a notable increase of experimental and demonstration work in the chief types of waste lands that occur in the province (ravine land, *bhur*, *usar*, *khola*), including plantations along canals. Probably the most important feature is the interest shown by Zamindars and big land-owners in our demonstration areas, quite a number of whom have already started similar operations for improving their waste and uncultured lands at their own expense. It is evident that Government can never treat anything but a very small fraction of the waste lands in the Province which are estimated to cover 25,000 square miles, but if the Zamindars themselves become interested in the work, the possibilities of afforestation and improvement are greatly increased. This interest, shown by Zamindars, has resulted in an increased demand for advice and assistance, which necessitates increased staff in the Afforestation Division, and proposals for expansion are at present before Government. During the last two or three years, and especially as a result of the recent fodder famine, the importance of increasing fodder supplies in the plains districts has been more clearly recognised. The demonstration that mere protection from grazing will give hay crops on barren *usar* plains is a feature of the quinquennium that is already producing

practical results, and a number of *usar* areas have been and are being taken up for hay production. Similarly, the increased production of hay cheaply and easily on *dhur* and other waste lands by scattering the seed of good fodder grasses (combined with protection) is a proved fact that will have valuable economic results.

Summarizing the development of the Afforestation division work during the past quinquennium there is a decided tendency to develop more on the lines of the Agricultural Department (*i.e.*, experiment, demonstration and advice) rather than the usual commercial forestry of the Forest Department."

9. *Plantations*.—Expenditure on plantations continues to increase, the following being the figures for the last 5 years—

| | |
|-------------------|----------|
| 1924-25 | 6 lakhs. |
| 1925-26 | 7 " |
| 1926-27 | 8 " |
| 1927-28 | 8 " |
| 1928-29 | 9 " |

The area brought under regeneration shows a steady and gratifying increase, and it is evident that a very important point is being realised in most provinces, and that is, that it is impossible to make very large areas of good plantations in any forest during any one year. During the tours of the Inspector General of Forests in various parts of India it was noticed over and over again that when endeavours were made to fell large areas of forests and to replace them with plantations it was almost certain that considerable areas would be failures. The population available for this work is limited and the subordinates who have to control it are often of an inferior description. Even in Burma where the local population take to plantation work very readily, it has been found to be a great mistake to endeavour to form large areas of plantations in any one year. It is being realised more and more that the success of new plantations depends principally on successful results in the first year, and there can be no greater crime in technical forest work than to cut a forest down without having taken proper measures to see that it can be replaced by a new forest. Scientific silviculture and plantations have received much more attention in the Andamans during the period than ever before.

10. *Communications and buildings*.—Expenditure on communications and buildings continues to increase, the figure in 1924-25 being 30 lakhs and that for 1928-29, 37 lakhs. Penetration into the more remote and isolated forests of India is steadily going on, and the extraction and utilisation of many valuable timbers must depend on useful means of communication. Burma, having the largest area of forest naturally leads the way in expenditure on communications, the annual figure having risen at the end of the quinquennium to 10 lakhs: otherwise the larger provinces mostly spend 3 or 4 lakhs each on communications and buildings, and as a rule more is spent on new roads than on new buildings; but it is realised that one of the best methods of supervising forest work is to have good housing for the staff not only at headquarters but in the forests.

Exploitation and Commercial development.

11. *Outturn of forest produce*.—The average annual outturn of timber and fuel from all sources during the quinquennium under review was 347,800,000 cubic feet against an average of 340,000,000 cubic feet in the previous quinquennium. The amount of timber and fuel extracted from the reserved forests was less during the year 1928-29 than during any other period of the quinquennium, and this accounts to a considerable extent for the drop in the general figures for revenue. This figure may be accounted for by the general difficulties under which trade has been labouring for some time past. Minor products from the reserved forests, which include many products such as lac, on the other hand, kept their position, and the year 1928-29 shows almost as good figures as any other period of the quinquennium under review. Taking the total for timber and fuel from all sources the outturn was well maintained.

During the year 1928-29, 21,200,000 cubic feet were removed by Government and 146,000,000 by purchasers. These figures are of course very largely

affected by the Burma figures, as in that province very large quantities of teak are extracted by the more important lessees.

The trade in lamboos continues to be almost stationary—their value being about 10 lakhs of rupees per annum. Bamboos are as a rule mostly extracted by villagers for their own use and for sale in the larger towns. It may be expected that the various schemes for the exploitation of bamboos for the manufacture of paper will lead to a very great development in the trade in this product.

Grazing and extraction of fodder grass has been also stationary for each of the years of the quinquennium under review. It may be noted that with the exception of the more remote forests in Burma, Assam, &c., the maximum amount of grass and other minor forest products have been extracted for a considerable number of years.

12. *Exploitation.*—The five years now under report have witnessed the initiation and development of certain large schemes, especially in Madras, which have had very indifferent success. It was hoped in Madras, by means of modern American methods, to extract and utilise very large quantities of valuable timbers, but the final result of this work was to prove that this extensive exploitation was not justified either by the stand of timber in the forests or by the possibilities of satisfying markets. The general result of the work during the 5-year-period has been, that the local Government have adopted a much more cautious and conservative policy, and are now content with making small but regular profits.

An important measure was sanctioned by the Government of India for the development of the forests of the Andamans. Hitherto we have been obliged to employ elephants to extract the logs to the creeks among the Islands, but they have never been satisfactory, mainly because the climate and fodder is unsuitable for them, and we have never been able to touch more than the fringes of the 2,500 square miles of the Andaman forests. It has now been decided to employ American methods in the North Andamans and American logging machinery has been purchased, and an American expert has been engaged, to take charge of the work. This work, if confined to forests which are obviously suitable, should be in the highest degree advantageous for the future trade in Andaman timbers. Elsewhere in India a great part of the trade in timber and forest products lies in the hands of small contractors, who are, on the whole, trustworthy if sufficient control is maintained over their operations. In Assam the manufacture of tea-boxes of plywood has made great strides, and has been much assisted by the favourable terms given to the manufacturers. In the United Provinces there has been a considerable increase in the direct supply of railway sleepers, and forest tramways have been successful. During the five years period, more than one million teak trees were girdled.

Mechanical tractors have not proved a financial success in Bombay, but the seven saw mills in that province have paid their way, and at Allapilli in the Central Provinces the saw mill has paid for itself twice over during the five years.

Agencies for the sale of timber.

13. The only agents with which the Government of India dealt were Messrs. Martin & Company who still act as agents for the sale of Andaman timbers in Calcutta, and their London firm also takes part in the sale of Andaman timbers. The agency held by Messrs. W. W. Howard Brothers and Company for the sale of timber from the Andamans and other parts of India, in London, terminated in December 1926, but considerable difficulty has been experienced in winding up this agency and in obtaining a satisfactory settlement of accounts.

A Timber Adviser was appointed by the High Commissioner for India in 1927, and his business has been to deal with the trade in Andaman and other Indian timbers in the London market. It cannot be stated that this

trade has so far been brought to a satisfactory state, as the intense conservatism of the English timber trade, and the difficulty of obtaining a footing for little known timbers, have combined to make satisfactory sales very difficult. We may, however, expect that in the near future these conditions will become easier.

During the 5-year-period under report the following quantities of timber were disposed of from the Andamans—

| | c. ft. |
|-------------------|-----------|
| 1924-25 | 1,133,820 |
| 1925-26 | 1,411,298 |
| 1926-27 | 1,610,187 |
| 1927-28 | 2,172,180 |
| 1928-29 | 2,469,416 |

The principal increase of exports took place to Calcutta.

Forest Management.

14. *Working Plans*.—The percentage of the total forest area in British India which is now under working plans has attained its highest figure in the year 1928-29, having risen from 45 per cent. in 1924-25 to 55 per cent. in 1928-29. It is gratifying also to record that in the important forest State of Kashmir very great progress has been made in bringing valuable forests of the State under proper working plans. During the last year of the quinquennium the most important additions to the area of forests under working plans were Bengal, 1,000 square miles, Burma 3,000 sq. miles and Madras 3,000 sq. miles. The total area under working plans rose from 54,000 square miles at the beginning of the quinquennium to 73,000 square miles at the end of the period, and it may be noted that many of these working plans are constantly being revised. The technical efficiency of these working plans varies considerably in different provinces. In Burma there are already 19,000 square miles under efficient working plans, while in Assam working plans have hardly begun. This has been the subject of a special note by the Inspector General of Forests when touring in that province. A number of the provinces have their own special Conservators or Deputy Conservators in charge of Working Plans, and this is a measure which should be adopted for all the larger provinces.

15. *Panchayat and Forest Village Systems*.—In March 1929 the total area under Panchayat management in Madras was 3,400 square miles. The control of these forests is now vested in the Board of Revenue and no technically trained officers are concerned in their management. It is too early as yet to decide whether this management by Panchayat is likely to be a success. Forest villages have continued to increase in number and will increase with the development of plantation work. Here also a note of warning must be struck, as it has been found that, unless forest villages are very carefully controlled, a great deal of forest and money are liable to be wasted.

Exhibitions.

16. The Forest Department was very well represented in the Indian and Burmese pavilions at the exhibition at Wembley in 1924. Messrs. W. W. Howard Brothers and Company, who were then Government agents for the sale of Indian timbers in England, were in charge of the exhibits, and deserve the utmost credit for the methods they employed to show Indian timbers to the best advantage. These exhibits were universally acknowledged to be the best timber exhibits in the whole of the exhibition at Wembley, and have resulted

in a greatly increased demand for many of the valuable and ornamental hardwoods of India, which have been employed on a considerable scale in the new India House at Aldwych.

Financial results.

17. The following statement shows the growth of forest revenue and expenditure during the past 65 years—the figures in all cases being the annual averages of the quinquennial periods :—

| Quinquennial period. | Gross revenue (Average per annum). | Expenditure (Average per annum). | Surplus (Average per annum). | Percentage of surplus to gross revenue. |
|------------------------------|--|--|------------------------------------|--|
| | Lakhs. | Lakhs. | Lakhs. | |
| 1864-65 to 1868-69 | 37.4 | 23.8 | 13.6 | 36.4 |
| 1869-70 to 1873-74 | 56.3 | 39.3 | 17.0 | 30.2 |
| 1874-75 to 1878-79 | 60.6 | 45.8 | 20.8 | 31.2 |
| 1879-80 to 1883-84 | 88.2 | 56.1 | 32.1 | 36.4 |
| 1884-85 to 1888-89 | 116.7 | 74.3 | 42.4 | 36.3 |
| 1889-90 to 1893-94 | 159.5 | 86.0 | 73.5 | 46.1 |
| 1894-95 to 1898-99 | 177.2 | 98.0 | 79.2 | 44.7 |
| 1899-00 to 1903-04 | 196.6 | 112.7 | 83.9 | 42.7 |
| 1904-05 to 1908-09 | 237.0 | 141.0 | 116.0 | 49.1 |
| 1909-10 to 1913-14 | 296.0 | 163.7 | 132.3 | 44.7 |
| 1914-15 to 1918-19 | 371.8 | 211.1 | 160.7 | 43.0 |
| 1919-20 to 1923-24 | 551.7 | 367.1 | 184.6 | 33.5 |
| 1924-25 to 1928-29 | 595.1 | 351.1 | 244.0 | 40.9 |

Most of the provinces show a steady increase of surplus, fortunately not too large in any case.

The slump in trade of the last few years is now evident in the surplus for the year 1928-29 which has fallen to 227 lakhs, having been 256 lakhs in 1927-28 and 264 lakhs in 1926-27. The figure, however, is still a most favourable one and indicates that the forests of India are being properly worked for the benefit of the country.

Research.

18. *General.*—Under no heading is it possible to record greater progress than under the head of Forest Research during the 5 years now being reported on. In almost all provinces research has come into its own, and in all the major provinces special officers have been appointed for research in utilisation and silviculture. Special officers have also been appointed in some provinces to deal with research in botany and entomology. The general scope and organisation of the work of these research officers is based on the principles observed at the Forest Research Institute at Dehra Dun, where the Research Institute has developed on a very large scale during the 5-year-period now being reviewed. It was decided in 1920 that the old premises at Chandbagh were quite inadequate for the accommodation of the Research Institute, as now required for India, and 1,200 acres were acquired some two miles from Dehra Dun. On this site a very large building has been erected and the opening ceremony was

performed by His Excellency the Viceroy on November 7th 1929. In addition to the main building a large range of Economic workshops has been erected, and quarters for all the staff, from the President down to the lowest paid subordinates, have been supplied. The Institute is now in full swing, and is for the greater part fully occupied. During the year 1930 it is expected that the Bio-Chemist will occupy the new laboratories now being erected for his use and when his transfer takes place, the whole of the Research staff will be on the new site.

A list of the Publications of the Forest Research Institute during the five-year-period under review is given at the end of this report.

19. *Silviculture*.—The most striking development of silviculture during the 5-year-period has been the extension of plantation work. As a result of the appreciation of the fact that economic forestry must depend on the adoption, wherever possible, of some uniform method of management, modern working plans have prescribed in very many cases the formation of regeneration working circles. Intensive fellings have been carried out over certain confined areas, the idea being in most cases to replace the forest felled by means of plantations of various description. The Burma system known as *taungya*, that is, a combination of agriculture with forestry, has been largely adopted in a number of the provinces of India. Nursery work has made very great strides. Plantations are now fenced, and seedlings are raised in very large quantities both in nurseries and on the original forest land. Along with this has gone the scientific development of thinnings, a most important point in connection with these young plantations.

In spite of all the investigations that have been carried out, the problem of the regeneration of sal in some of the valuable forests of the United Provinces has not yet been fully solved, and the scientific investigation of the regeneration of the splendid evergreen forests of Burma, Assam and the West Coast has only recently been started. These are two of the most important enquiries that are being carried out by the Forest Research Institute and the local Silviculturists, who are all working together for the solution of these problems.

A number of volume and yield tables have been published during the 5-year-period under review, and they will be of the utmost value to working plan officers and divisional officers.

In March 1929 a very large and representative number of forest officers attended the Silvicultural Conference at Dehra Dun, the most important Silvicultural Conference that has ever been held in India. The more important subjects dealt with at this Conference were as follows :—

1. The relations of Central and Provincial Silviculturists.
2. Revision of the Glossary of Technical Terms.
3. Standardisation of methods of experimental research.
4. Importance of the origin of seed in artificial regeneration.
5. Problem of the pure teak plantation.
6. Regeneration of evergreen forests.
7. Artificial regeneration with selection system in mixed forests.
8. Revision and compilation of Statistical Code.
9. Methods of research on thinnings.
10. Standardisation of methods of stock mapping and symbols.
11. Method of calculating sustained yield.
12. Rate of interest to be charged on afforestation and regeneration.

In no branch of forestry has such an awakening taken place among forest officers as in the development of silvicultural research. This subject has engrossed the attention of a large number of experts, and forestry methods in the provinces have developed very greatly of recent years as a result of these enquiries.

20. Forest Economy.—As a result of Mr. R. S. Pearson's long and able administration of the Forest Economic Branch, the Government of India now has at Dehra Dun a series of forest workshops and experimental laboratories without parallel anywhere else in the world. The value of the experimental work done in this Branch at Dehra Dun is daily exemplified by the unending stream of enquiries which are received from persons doing business in timber and other forest products, not only in India but in many other parts of the world. The officers in charge of this Branch have been for the greater part trained in Europe, America and the Continent, and their technical efficiency is now of a very high order. The greater part of the expenditure on the Forest Research Institute is incurred in the Economic Branch, the budget of this Branch being about 5 lakhs, out of a total of 10½ lakhs, in the year 1928-29.

A considerable amount of utilisation work has also been carried out during the period in Burma, and work has also begun in Madras, the United Provinces and Bengal.

The following are the main heads under which forest utilisation has been studied at the Forest Research Institute :—

Seasoning.—The progress made in scientific seasoning of valuable hardwoods of India in the two types of kilns employed has been very great. Chart showing how the principal timbers should be seasoned have been prepared and the trained staff is available to assist enquiries in organising scientific seasoning. The most important advance made is in the railway workshops at Lillooah, where kilns have been established on the lines advocated at Dehra Dun. As a result of experimental work, seasoning kilns have also been established in the Government Gun Carriage Factory at Jubbulpore. These were under the charge of Mr. Fitzgerald who was for a long time at Dehra Dun, and after leaving Dehra Dun organised the work at Jubbulpore and was in charge of the kilns until his death in 1930. It is hoped to establish kilns in the Andamans for the scientific treatment of the hardwoods obtainable there, as the extremely trying climate of these Islands prevents, to a considerable extent, the export of timbers to Europe in good condition. Seasoning kilns have also been built in Madras and Burma, and the science of seasoning is gradually being understood elsewhere in India.

Wood Preservation.—For a considerable part of the period under report the Wood Preservation Section was unfortunately without an experienced officer in charge. The most important item of research in this section is the treatment of railway sleepers, and during the period under review very great progress was made in the experimental treatment of many hardwoods, to make them fit for use as sleepers in the Railways of India. One of the aims of this section is to prove to the Railways that Indian timbers, although they may be originally perishable and liable to attack by white ants, can be treated in such a way that they will compete on favourable terms with other timbers, which have been imported in considerable quantities from foreign countries, such as *Eucalyptus* from Australia. Research methods have met with much success, and wood preservation plants have been erected by the North Western Railway at Dhilwan, where many thousands of sleepers are treated annually. This research is of the greatest importance to the Forest Department as it is necessary at the present moment to contend with the increasing use of steel railway sleepers by all important railways.

Timber Testing.—This is a large section of the Economic Branch and has done an immense amount of good work. Under the charge of Mr. Seaman it has developed very greatly, and has now produced results of the utmost value to all timber users in this country. During the last year of the period under report 41,000 mechanical tests were carried out and 39,000 physical determinations. The number of computations in the computing office was 41,000, and many letters and reports were issued. The following important subjects may be mentioned as having been under investigation during the 5-year-period :—

Parts of aeroplanes; plywood; timbers for railway carriage work; Picker arms in jute and cotton mills; timbers for piles under water; tea chests; timbers for rifle stocks; timbers for boat building.

The results of the experimental work in this section are tabulated in such a way that they can be easily used by all those interested in the strength of the timbers, and the results are always published immediately they are available.

Paper Pulp.—Mr. Raitt, officer in charge of the Paper Pulp section, left the Institute in March 1929, and Mr. Bhargava, who had been on deputation to Europe and America, took over charge at that time. The paper and pulp plant has continued to operate successfully throughout the period under review. Many valuable investigations have been carried out, specially with regard to bamboos, one of the most important forest products of Assam, Burma, Madras and Bombay. Although the results at Dehra Dun have not yet led to any very striking commercial success in making pulp from bamboo and grass, it is expected that within a short time one or two large companies will be floated to undertake this work, probably in Burma. In the meantime, work on a small scale has been carried out in Madras and in Calcutta. Woods and grasses have also been the subject of investigation, and much valuable advice has been given on this subject.

Wood Technology.—Dr. Brown, an American who had been employed at the Forest Research Institute for 1½ years, left Dehra Dun in 1923. After that, no officer was appointed to the charge of this important section for some time, but in the year 1929 Mr. Chowdhury, who had been under training in America under Dr. Brown for two years, was appointed to the charge of the section. A knowledge of the structure and qualities of wood is of the utmost importance to all research officers who deal with utilisation, and this section has made considerable progress during the period. In 1925 Dr. Brown published a Manual of Indian Wood Technology, which, although termed "elementary" contained much more than any volume published on this subject before. Dr. Brown and Mr. Pearson are now engaged in the compilation of a very important work on the more important timbers of India. This will be published by the Clarendon Press and will contain full accounts of all the important timbers together with micro-photographs of wood structures.

Minor Products.—This section was more or less in abeyance for a considerable time, but a special officer of the Forest Department from Madras was appointed to the charge of the section in 1926. The organisation of the section has taken a considerable time, but useful work has been carried out, specially with regard to medicinal plants, charcoal, resins, briquetting, match manufacture, fibres and turpentine.

Wood Workshops.—During the 5-year-period the wood workshops in their new home have done an immense amount of most useful work. In addition to training Indian carpenters, most valuable investigations have been carried out in the use of Indian woods for plywood, and into the use of hardwoods for making furniture and other goods of many descriptions. The section to a considerable extent is supplementary to the other sections, such as Timber Testing, Seasoning and Wood Preservation. A great deal of original and valuable work has also been done by Mr. Nagle, the officer in charge of this section. Mr. Nagle is now devoting his energies principally to the enquiry into Indian woods for plywood. It is to be hoped that as a result of the recommendations of the Tariff Board an experimental match factory may be established at Dehra Dun, but this has not yet been found possible.

21. Forest Botany.—During the 5-year-period, Forest Botany has made great strides in Burma and at the Central Research Institute. Systematic Botany has taken the first place in the work and much help has been given to Forest Officers all over India in the identification of specimens. The Forest Botanist has continued to work on Duthie's Flora of the Gangetic Plains, and it is now approaching completion. Experiments have been made to test the effect of soil inoculation on the growth of plants. The gardens in charge of the Forest Botanist have been much improved, many rare and valuable plants have been grown, and a great deal of seed has been supplied to enquirers in various parts of the world.

The work done in Mycology has been most valuable. The newly appointed Mycologist has produced an authoritative record on *Peridermium*, which has

been published. In Burma the Forest Botanist has succeeded in greatly increasing our knowledge of the flora of that province.

The investigation of the spike disease in sandal has been carried on in Mysore, Madras and Coorg during the five years, but no definite results are available so far.

22. *Forest Entomology*.—Great progress was made under the head of Forest Entomology, not only at Dehra Dun, but also in Burma. The most important insects which have been under special investigation are—the teak bee-hole borer in Burma; the sal borer in the United Provinces and the Central Provinces; and the teak defoliator of Madras. Continuous and well organised research work has been carried out in connection with these insects. The laboratories and collections at the new Forest Research Institute are well equipped, and on a very large scale, and the staff is well trained and has completed a great deal of good work. Besides the three pests named above, many other minor insect plagues have been investigated. The Forest Entomologist and Systematic Entomologist are in correspondence with experts all over the world, and the Institute at Dehra Dun has acquired an international reputation.

23. *Chemistry*.—The work of the Forest Chemist is to a considerable extent auxiliary to the other branches at the Forest Research Institute. The investigations of various forest medicinal plants, of forest soils, of turpentine, of wood preservatives, may be mentioned as the main headings under which investigations have been carried on, but the Forest Chemist has continually to assist all the Branch officers in their many varied enquiries. It has been found necessary to increase the establishment recently.

Forestry Committee.

24. In February and March 1929 a Committee appointed by the Government of India investigated the work of the Forest Research Institute at Dehra Dun, and made recommendations regarding its future lines of work. The members of the Committee were Sir Chunilal Mehta, Chairman, Professor Lindemann of Oxford and Mr. Wroughton of the Bombay Burma Trading Corporation, Limited, Rangoon. The Committee made a most careful investigation into all the work at the Institute and their principal recommendations were as follows:—

- (1) The constitution of an Advisory Board with representatives from the Governors' provinces, the Railway Board, and Chambers of Commerce.
- (2) A recommendation that more control should be given to the President.
- (3) The appointment of a Director of Research who must be a first class scientist. He will be subordinate to the President, Forest Research Institute and College.
- (4) The appointment of a Personal Assistant to the Inspector-General of Forests and President, Forest Research Institute and College.
- (5) Centralisation of Branch offices.
- (6) Improvement of methods of recruitment of the sectional officers and subordinates.
- (7) The necessity for training officers abroad and for keeping in touch with other similar Institutions by means of visits. Stress was also laid on maintaining intimate touch with forest officers in provinces, with the Railways, etc.

Protection of the Fauna of the Country.

25. During the 5-year-period under review, public interest was considerably stimulated regarding the protection of the splendid fauna of British India

and Burma. The Society for the Protection of the Fauna of the Empire has had a considerable number of recruits in India, and measures have been taken where possible to protect the rarer animals which are in danger of extermination. In Burma, especially, progress has been made in this respect, a forest officer having been put on special duty as Game Warden to protect the animals. Useful sanctuaries have been made in Burma and elsewhere, where wild animals may be seen in their native haunts. During the 5-year-period 1,200 elephants were captured in Burma. The greatest difficulty encountered in protecting wild animals in India is the fact that guns which are nominally issued for the protection of crops are frequently used by poachers. Many of the finest game animals in India will certainly be exterminated if the issue of guns is not better controlled than at present.

A. RODGER,
*Inspector-General of Forests to the
 Government of India.*

DEHRA DUN; }
The 12th July, 1930. }

List of Forest Publications issued by the Forest Research Institute, Dehra Dun, during the 5-year-period ending 31st March 1929.

1.—BULLETINS (NEW SERIES.)

| No. | | Rs. A. P. |
|-----|--|-----------|
| 56. | A Report on the Tan Values of Indian Myrobalans and Burma <i>Terminalias</i> , by J. A. Pilgrim. | 0 6 0 |
| 57. | Tan Investigation of the Burma Hill Pine, <i>Pinus Khaya</i> bark and <i>Pyinkado</i> , <i>Xylia dolabriformis</i> , by the same author. | 0 3 0 |
| 58. | General Volume Tables for <i>Chir</i> (<i>Pinus longifolia</i>), by S. H. Howard. | 0 8 0 |
| 59. | Summary of results of Treated and Untreated Experimental Sleepers laid in the Various Railway Systems of India, by J. H. Warr. | 1 14 0 |
| 60. | Note on <i>Ainee</i> (<i>Artocarpus hirsuta</i> , Lamk), by C. C. Wilson. | 0 7 0 |
| 61. | Eucalyptus in the Plains of North-West India, by R. N. Parker. | 0 5 0 |
| 62. | Preliminary Yield Table for <i>Dalbergia Sissoo</i> , by S. H. Howard. | 0 2 0 |
| 63. | Eucalyptus Trials in the Simla Hills, by R. N. Parker. | 0 8 0 |
| 64. | Summary of results of Laboratory Experiments with different wood Preserving Antiseptics, by S. Kamesam. | 1 12 0 |
| 65. | Tables for bark deductions from logs, by S. H. Howard. | 0 3 0 |
| 66. | A Note on the Working Qualities of some Common Indian Timbers, by H. E. Kinns. | 0 10 0 |
| 67. | <i>Chir</i> (<i>Pinus longifolia</i>) Seed Supply, by S. H. Howard. | 0 3 0 |
| 68. | Notes on the Comparative Economic Cost of Wood and Metal Sleepers in India, and Cost of Treatment, by J. H. Warr and H. Trotter (<i>with-drawn</i>). | ... |
| 69. | The Mechanical and Physical Properties of Himalayan Spruce and Silver Fir, by L. N. Seaman, assisted by C. R. Ranganathan. | 1 1 0 |
| 70. | <i>Hoplocerambyx spinicornis</i> —An Important Pest of Sal, by D. J. Atkinson. | 0 15 0 |

2.—RECORDS.

| | | |
|---------|--|--------|
| Vol. X, | Part VIII.—The Constituents of some Indian Essential Oils, Part XIII.—The Essential Oil from a New Species of <i>Andropogon</i> occurring in the Etawah District, by J. L. Simonsen. | 0 3 0 |
| " X, | " IX.—Tannin investigation of some Burmese <i>Dipterocarps</i> , by J. A. Pilgrim. | 0 7 0 |
| " X, | " X.—The Mangroves of South Tenasserim, by the same author. | 0 15 0 |
| " X, | " XI.—Report on Burma Oak and Chestnut Tans, by the same author. | 1 1 0 |
| " XI, | " I.—The Constituents of some Indian Essential Oils, Parts XIV-XV, by J. L. Simonsen. | 0 3 0 |
| " XI, | " II.—Contributions towards a knowledge of Twisted Fibre in trees, by H. G. Champion. | 2 8 0 |
| " XI, | " III.—Regeneration with the assistance of <i>Taungya</i> in Burma, by H. R. Blanford. | 1 4 0 |
| " XI, | " IV.—On Some Indian <i>Brenthida</i> , Parts I—III, by Richard Kleins, C. F. C. Beeson and J. C. M. Gardner. | 1 5 0 |
| " XI, | " V.—The Constituents of some Indian Essential Oils, Part XVI, by M. Gopal Rau. | 0 12 0 |
| " XI, | " VI.—The Constituents of some Indian Essential Oils, Part XVII, by M. Gopal Rau and J. L. Simonsen. | 0 2 0 |
| " XI, | " VII.—Volume Tables for Teak (<i>Tectona grandis</i>) and Sal (<i>Shorea robusta</i>) for the Central Provinces, by V. K. Maitland. | 0 9 0 |
| " XI, | " VIII.—The Economic Importance and Control of the Sal Heartwood Borer, by C. F. C. Beeson and N. C. Chatterjee. | 1 4 0 |
| " XI, | " IX.—Summary of Investigations on Bamboos and Grasses for Paper Pulp, by W. Raitt. | 0 8 0 |
| " XI, | " X.—Notes on the Antiseptic Treatment of Assam Timbers for Railway Sleepers, by J. H. Warr assisted by S. Kamesam. | 1 14 0 |
| " XII, | " I.—Volume and Outturn Tables for Sal, by S. H. Howard. | 1 2 0 |
| " XII, | " II.—Identification of Immature Stages of Indian <i>Cerambycidae</i> , I, <i>Cerambycini</i> , by J. C. M. Gardner. | 0 8 0 |
| " XII, | " III.—Second Interim Report on Work under Project No. I, by L. N. Seaman. | 1 12 0 |
| " XII, | " IV.—Yield Table for clear-felled Sal Coppice, by H. Howard. | 0 8 0 |
| " XII, | " V.—Yield and Volume Tables for Chir, by the same author. | 1 0 0 |
| " XII, | " VI.—Yield and Volume Tables for Deodar, by the same author. | 0 8 0 |
| " XII, | " VII.—Descriptions of new species of <i>Nipontiidae</i> and <i>Cerambycidae</i> from India, by J. C. M. Gardner. | 0 6 0 |

| | | Rs. A. P. |
|--|--|-----------|
| 2.—RECORDS— <i>contd.</i> | | |
| Vol. XII, Part VIII.—Note on some Indian Florids, Part I, by J. B. Corporaal, and Part II, by C. F. C. Beeson. | | 0 5 0 |
| „ XII, „ IX.—Notes on Artificial Regeneration in North India, by S. H. Howard. | | 1 6 0 |
| „ XII, „ X.—On Some Indian Coleoptera, Part I, by E. Fleutiaux, and Part II, by J. C. M. Gardner. | | 0 4 0 |
| „ XIII, „ I.—Illustrations of Indian Forest Plants—Part I, Five Species of <i>Dipterocarpus</i> , by R. N. Parker. | | 1 0 0 |
| „ XIII, „ II.—Identification of Immature Stages of Indian Cerambycidae, II; and Descriptions of Three Indian Beetle Larvae (Carabidae, Col.) by J. C. M. Gardner. | | 1 4 0 |
| „ XIII, „ III.—Commercial Volume Tables for Sal in the wet mixed forests of the Bengal Duars, by Parma Nand Sari. | | 0 6 0 |
| „ XIII, „ IV.—Volume Tables for Sundri in the Sunderbans, Bengal, by the same author. | | 0 10 0 |
| „ XIII, „ V.—Epidemic attacks by the Sal Heartwood Borer (<i>Hoplocrambus spinicornis</i>) in the forests of South Mandla Division, C. P., by W. A. Muir. | | 2 10 0 |
| „ XIII, „ VI.—On some Indian Coleoptera, Hemiptera and Thysanoptera, Part I, by R. Kleine, Part II, by A. Thery, Part III, by O. C. Ollenbach; Part IV, by Carl J. Drake; and Part V, by Dudley Moulton. | | 1 6 0 |
| „ XIII, „ VII.—Slash in Chir Pine (<i>Pinus longifolia</i>) Forests; Causes of Formation, its Influence and Treatment, by J. E. C. Turner. | | 8 6 0 |

3.—MANUALS.

| | |
|--|--------|
| Explanatory Notes on Forest Law (3rd Edition) | 2 2 0 |
| Manual of Forest Mensuration, Revised by C. E. Simmons | 3 14 0 |
| An Elementary Manual on Indian Wood Technology, by H. P. Brown | 4 0 0 |

4.—LECTURE NOTES.

| | |
|---|--------|
| Special Lecture Notes on the Minor Forest Products of India for Indian Forest Students, by H. Trotter. | 1 6 0 |
| Special Lecture Notes on the Preservation of Timber for Indian Forest Students, by J. H. Warr. | 1 6 0 |
| Special Lecture Notes on Pulp and Paper Making for Indian Forest Students, by W. Raitt. | 0 8 0 |
| Special Lecture Notes on Timber Strengths and Timber Testing for Indian Forest Students, by L. N. Seaman. | 3 6 0 |
| Special Lecture Notes on Timber Seasoning for Indian Forest Students, by S. Fitzgerald and S. N. Kapur. | 1 6 0 |
| Special Lecture Notes on Sawmill, Wood Workshop and Tool Room Management for Indian Forest Students, by W. Nagle. | 0 12 0 |

5.—OTHER PUBLICATIONS.

| | |
|---|--------|
| Forest Research Institute and College Calendar, 1925 | 5 6 0 |
| „ „ „ „ „ 1928 | 6 14 0 |
| Progress Report of Forest Research Work in India for 1923-24 | 2 8 0 |
| „ „ „ „ „ „ 1924-25 | 2 12 0 |
| „ „ „ „ „ „ 1925-26 | 2 14 0 |
| „ „ „ „ „ „ 1926-27 | 4 0 0 |
| „ „ „ „ „ „ 1927-28 | 4 12 0 |
| Progress Report of the Imperial Forest College, Dehra Dun, for 1923-24 | 1 6 0 |
| „ „ „ „ „ „ „ 1924-25 | 1 8 0 |
| „ „ „ „ „ „ „ 1925-26 | 2 14 0 |
| „ „ „ „ „ „ „ 1926-27 | 1 12 0 |
| „ „ „ „ „ „ „ 1927-28 | 3 2 0 |
| The Development of India's Forest Resources, compiled by the Economic Branch. | 2 12 0 |
| Project No. II.—Tests of Indian Timbers in Structural Sizes, by L. N. Seaman. | 0 8 0 |
| Project No. IV.—Mechanical Strength, Seasoning properties, Treatment of and Key to Certain Indian Sleeper Woods, by R. S. Pearson, L. N. Seaman, C. V. Sweet, J. H. Warr and H. P. Brown. | 0 9 0 |
| Project No. V.—Testing of Raw Materials (Paper Pulp Section), by W. Raitt. | 0 5 0 |
| Project No. VII.—Kiln Seasoning of Indian Timbers, by S. Fitzgerald and S. N. Kapur. | 1 4 0 |
| Key to Families of Flora Simlensis, compiled by R. Banerjee. | 1 0 0 |
| A System of Filing Information on Forestry, by S. H. Howard. | 2 14 0 |
| Forest Flora of the Chakrata, Dehra Dun and Saharanpur Forest Divisions, U. P., by Upendranath Kanjilal, Third edition, revised and enlarged by Basant Lal Gupta. | 3 3 0 |
| Elementary Silviculture in Urdu, by Muhammad Hakimuddin. | 1 8 0 |
| Elementary Silviculture in Hindi, by the same author. | 3 0 0 |

STATEMENT I.

Area of forests under the control of the Forest Department.

| Province. | | Forest area in square miles. | | | | Percentage of forests to whole area of Province. | Remarks. |
|---|-----------------------|------------------------------|------------|------------------|------------|--|--|
| Name. | Area in square miles. | Reserved. | Protected. | Unclassed State. | Total. | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Bengal | 76,755 | (a) 6,462 | (b) 628 | 3,115 | 10,535 | 13.7 | (a) Includes 20 square miles of reserved forests not under the management of Forest Department. (b) Includes 11 square miles of other protected forests not under the control of Forest Department. |
| United Provinces | 106,720 | (c) 5,150 | 4 | 38 | 5,201 | 4.8 | (c) Includes 1 square mile of leased forests. |
| Punjab | 97,231 | (d) 1,532 | (e) 3,210 | (f) 590 | 5,341 | 5.5 | (d) Includes 350 square miles of leased forests but excludes 500 square miles of reserved forests not under the control of the Forest Department. (e) Excludes 71 square miles not under the control of the Forest Department. (f) Excludes 235 square miles of forest and village forest lands. |
| Burma | 182,593 | 29,190 | ... | (g) 93,784 | 122,974 | 67.3 | (g) Includes 6,613 square miles without forest growth. |
| Federated Shan States . . | 60,614 | 3,057 | ... | 21,541 | 24,608 | 40.6 | |
| Bihar and Orissa | 83,083 | 1,790 | (h) 1,271 | 3 | 3,073 | 3.7 | (h) Excludes 681 square miles not under the control of Forest Department. |
| Aesam | 55,156 | 6,105 | ... | 14,302 | 20,407 | 36.9 | |
| Central Provinces (including Borar). | 99,931 | (i) 19,611 | ... | ... | 19,611 | 19.6 | (i) Includes 174 square miles of leased forests. |
| Coorg | 1,532 | 519 | ... | ... | 519 | 33.2 | |
| North-West Frontier Province. | 13,163 | (j) 247 | (k) | ... | 245 | 1.8 | (j) Excludes 14 square miles of Civil and Military Reserved Forests. (k) Excludes 105 square miles of civil protected forests and 183 square miles of Gozara forests. |
| Ajmer | 2,767 | 141 | ... | ... | 141 | 5.1 | |
| Baluchistan (portions under British Administration) | 51,228† | 313 | ... | 472 | 785 | 1.4 | |
| Andamans and Nicobar | 3,149† | 52 | ... | 2,138 | 2,190 | 69.6 | (l) Includes 27 square miles of Tekadi leased forests and 52 square miles of Ryots forests handed over to Panchayats. (m) Reserved lands. |
| Madras | 143,257 | (n) 18,914 | ... | (m) 343 | 19,257 | 13.4 | |
| Bombay (including Sind) | 123,230 | 13,710 | 1,105 | ... | (n) 14,905 | 12.1 | (n) Includes 2,586 square miles of reserved and protected forests not under the management of the Forest Department. |
| Total 1928-29 | 1,103,593† | 100,840 | 6,708 | 133,665 | 240,822 | 22.7 | |
| „ 1927-28 | 1,100,579† | 105,538 | 7,658 | 106,861 | 250,110 | 22.6 | |
| „ 1926-27 | 1,000,146† | 105,285 | 8,626 | 137,844 | 251,755 | 22.8 | |
| „ 1925-26 | 1,099,688† | 105,041 | 8,405 | 138,834 | 252,280 | 22.9 | |
| „ 1924-25 | 1,099,072† | 103,764 | 8,278 | 117,554 | 229,596 | 20.8 | |
| | | 2,870 | ... | 21,575 | 21,445 | ... | For Federated Shan States. |

† Figures taken from the Census Report of 1921.

‡ Including Delhi Province and Pargana Manpur.

STATEMENT II.

Progress made in Forest Settlements during the year 1928-29.

| Province. | Area in square miles: | | | Cost during year. | | Entire cost per square mile of areas finally settled. |
|--|------------------------------|----------------------------------|----------------------------|---------------------|-------------------|---|
| | Finally settled during year. | In hand at commencement of year. | Taken in hand during year. | In Forest Accounts: | In other Accounts | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | | | Rs. | Rs. | Rs. |
| Bengal | 1,187 | 11 | 1,203 | 1,079 | ... | 269 |
| United Provinces | 5 | 10 | 3 | ... | ... | ... |
| Punjab | 16 | 16 | ... | ... | ... | ... |
| Burma | 144 | 1,793 | 431 | 2,187 | ... | ... |
| Federated Shan States | ... | 64 | 30 | 30 | .. | ... |
| Bihar and Orissa | 1 | 2 | ... | .. | ... | ... |
| Assam | 22 | 69 | 3 | 16 | ... | ... |
| Central Provinces | ... | ... | ... | ... | ... | ... |
| Coorg | ... | ... | ... | ... | ... | ... |
| North-West Frontier Province | 9 | 9 | ... | ... | ... | ... |
| Ajmer | ... | ... | ... | ... | ... | ... |
| Baluchistan | ... | ... | ... | ... | ... | ... |
| Andamans | ... | 83 | ... | ... | ... | ... |
| Madras | 1 | 118 | 11 | ... | ... | ... |
| Bombay | 48 | 156 | 31 | ... | ... | ... |
| 1923-29 | 1,433 | 2,330 | 1,715 | 3,312 | ... | 269 |
| 1927-28 | 579 | 1,979 | 2,322 | 28,183 | ... | 243 |
| Total 1925-27 | 448 | 2,506 | 570 | 32,703 | ... | ... |
| 1925-26 | 342 | 2,520 | 666 | 10,132 | ... | ... |
| 1924-25 | 651 | 2,662 | 1,056 | 11,008 | ... | 15 |

STATEMENT III.

Demarcation and maintenance of boundaries.

| Province. | Length of boundaries artificially demarcated during the year. | Length of previously existing boundaries repaired. | Length of previously existing boundaries not repaired. | Total length of artificially marked boundaries at the close of the year. | Length of boundaries not demarcated at the close of the year. | Length of natural boundaries not requiring artificial marks. | Total length of boundaries at the close of the year. | Expenditure on demarcation during the year. | |
|-------------------------------|---|--|--|--|---|--|--|---|-------------|
| | | | | | | | | On new work. | On repairs. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. | Rs. | Rs. |
| Bengal . . . | 263 | 1,130 | 1,295 | 2,696 | 125 | 1,174 | 3,995 | 1,099 | 6,636 |
| United Provinces . | 25 | 2,870 | 5,762 | 8,637 | 2 | 2,633 | 11,492 | 2,679 | 20,663 |
| Punjab . . . | 23 | 1,838 | 6,521 | 8,375 | 5 | 1,418 | 9,798 | 1,349 | 5,930 |
| Burma . . . | 357 | 3,316 | 13,919 | 17,622 | 157 | 3,307 | 21,056 | 5,306 | 33,505 |
| Federated Shan States | 15 | 277 | 1,019 | 1,311 | ... | 523 | 1,861 | 559 | 1,641 |
| Bihar and Orissa . | 101 | 2,812 | 1,864 | 4,809 | 40 | 334 | 5,233 | 704 | 2,862 |
| Assam . . . | 9 | 1,237 | 1,315 | 2,561 | 20 | 2,302 | 4,863 | 519 | 10,401 |
| Central Provinces . | 372 | 7,995 | 23,868 | 31,755 | 60 | 3,351 | 35,121 | 67 | 20,701 |
| Coorg . . . | ... | 92 | 377 | 469 | ... | 67 | 536 | ... | 2,223 |
| North-West Frontier Province. | ... | 118 | 639 | 777 | ... | 139 | 916 | ... | 1,153 |
| Ajmer . . . | ... | 13 | 220 | 233 | ... | 158 | 391 | ... | 297 |
| Baluchistan . . . | ... | 2 | 455 | 460 | ... | 77 | 637 | 47 | 5 |
| Andamans . . . | ... | ... | ... | 36 | 36 | 23 | 59 | ... | ... |
| Madras . . . | 259 | 15,924 | 6,471 | 22,602 | 408 | 2,465 | 26,252 | 6,850 | 3,942 |
| Bombay . . . | 100 | 25,126 | 13,034 | 38,260 | 46 | 2,820 | 41,126 | 650 | 3,706 |
| 1923-24 . | 1,523 | 62,759 | 76,327 | 140,633 | 895 | 21,061 | 163,419 | 20,759 | 1,16,120 |
| 1927-28 . | 816 | 63,675 | 75,613 | 136,037 | 1,057 | 20,936 | 162,044 | 16,509 | 1,07,753 |
| Total 1926-27 . | 1,095 | 63,036 | 76,880 | 141,769 | 1,131 | 20,713 | 163,580 | 25,096 | 99,782 |
| 1925-26 . | 438 | 69,957 | 79,501 | 149,412 | 1,405 | 20,872 | 171,618 | 9,849 | 1,05,757 |
| 1924-25 . | 903 | 69,697 | 78,784 | 149,683 | 1,606 | 21,223 | 172,607 | 17,101 | 1,00,429 |

STATEMENT IV.

Forest survey Operations from 1st April 1928 to 31st March 1929.

| Province. | Forest surveyed. | Nature of survey operations. | | | | | | Total area of detail survey. | | Expenditure of the year including mapping and publishing charges debitable to Forests. | Remarks. |
|--------------------|----------------------|------------------------------|-----------|----------------|------------|----------------|------------|------------------------------|-------------------|--|--|
| | | 1" | | 2" | | 4" | | | | | |
| | | Detail survey. | | Detail survey. | | Detail survey. | | 1928-29. | Total up to date. | | |
| 1 | 2 | Area | Cost rate | Area. | Cost rate. | Area. | Cost rate. | 9 | 10 | 11 | 12 |
| | | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Andamans | ... | ... | ... | ... | ... | ... | ... | ... | 527 | Rs. A. P. | |
| Assam | ... | ... | ... | ... | ... | ... | ... | ... | 5684 1 | ..... |  |
| Bengal | Buxa | 18 | ... | ... | ... | ... | ... | 45 18 | 4761 7 | ... | |
| Bihar and Orissa. | Hazaribagh | 18 36 | .. | ... | ... | ... | ... | (a) 18 36 | 2100 95 | ..... | (a) Of this 15 97 Sq. Miles are supplementary survey and 2 89 sq. miles original survey. Cost of surveys not debitable to Forest Department. |
| | Palaman | 3 33 | ... | ... | ... | ... | ... | 3 33 |  | ..... |  |
| N.-W. F. P. | ... | ... | ... | ... | ... | ... | ... | ... | 165 00 | ..... |  |
| Balnobistan | ... | ... | ... | ... | ... | ... | ... | ... | 241 3 | ..... |  |
| Punjab | Changa Manga . . . | ... | ... | ... | ... | 20 0 | 64 6 | 20 0 | 4355 0 | 1,001 0 0 | |
| United Provinces. | ... | ... | ... | ... | ... | ... | ... | ... | 7142 7 | ..... |  |
| Ajmer | ... | ... | ... | ... | ... | ... | ... | ... | 172 01 | ... | |
| Madras | Lower Godavari . . . | ... | ... | 116 | 53 3 | ... | ... | (b) 116 | 18211 | 6,120 0 0 | (b) Actual survey 42 sq. miles overlap survey 74 sq miles. |
| India. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... |  |
| Coorg | ... | ... | ... | ... | ... | ... | ... | ... | 478 | ..... |  |
| Central Provinces. | ... | ... | ... | ... | ... | ... | ... | ... | 19535 | ..... |  |
| Bombay | ... | ... | ... | ... | ... | ... | ... | ... | 13232 9 | ..... |  |
| | Honzada and Maubin . | 764 13 | ... | ... | ... | 4 65 | ... | 768 76 | | | S 5 L. M. of Boundary Survey. |
| Burma | South Arakan | 205 28 | .. | ... | ... | ... | (c) | 205 28 | | | (c) Cost is not debitable to Forest Department. |
| | Thayetmyo | 15 36 | ... | ... | ... | ... | ... | 15 36 | | | |

STATEMENT IV—*contd.*Forest survey Operations from 1st April 1928 to 31st March 1929—*contd.*

| Province. | Forest surveyed. | Nature of survey operations. | | | | | | Total area of detail survey. | | Expenditure of the year including mapping and publishing charges debitable to Forests. | Remarks. |
|---------------|------------------------------------|------------------------------|----------------|----------------|----------------|----------------|----------------|------------------------------|-------------------|--|---|
| | | 1" | | 2" | | 4" | | 1928-29. | Total up to date. | | |
| | | Detail survey. | Detail survey. | Detail survey. | Detail survey. | Detail survey. | Detail survey. | | | | |
| 1 | 2 | Area. | Cost rate. | Area. | Cost rate. | Area | Cost rate. | 9 | 10 | 11 | 12 |
| Burma—contd | South Pegu | ... | ... | 60 | ... | 45 00 | .. | (e) 51 | 256140 | Rs. A. P. 2,43,670 0 0 | (e) Includes Rs. 113 cost of 2 L. M. traversed after 31st March 1928, Rs. 1,037 cost of computation of 61 L. M. traversed (59 L. M. last year 2 L. M. this year), Rs. 5,301 cost of 31 sq. miles surveyed before 31st March 1929 cost of balance 8 miles will appear in 1929-30, and cost of 23 L. M. of traversing commenced after 31st March 1929, and completed before 30th June 1929 will appear in next return for 1929-30, also cost of 6 sq miles of Tamabin Reserve Forest Revised on 2-inch scale. (f) Excludes 4 75 sq. miles of unclassified forests. (g) Excludes 0 08 sq. miles of unclassified forests. (h) 116 7 L. M. of boundary traversing and 30 3 L. M. of tie lines were done cost for this not paid for by Forest Department. (d) Includes Rs. 5,465 cost of 18 sq. miles on 4-inch scale surveyed last year and cost of fair mapping. Includes Rs. 667 the cost of traverse computation of 51 L. M. traversed last year and Rs. 600 cost of survey of 4 sq. miles surveyed after 31st March 1923 in season 1927-28. (i) Cost of survey to end of field season 1927-28 (area reported in form 10 of last year) and cost of mapping. |
| | Katha | ... | ... | ... | .. | 64 18 | ... | (f) 64 18 | | | |
| | Mansi | ... | ... | ... | ... | 106 69 | ... | (g) 106 69 | | | |
| | Upper Chinthein (h) . . | ... | ... | ... | ... | ... | ... | ... | | | |
| | Insein (d) | ... | ... | ... | ... | ... | ... | ... | | | |
| | Magwe | ... | ... | ... | ... | ... | ... | ... | | | |
| | Meiktila | ... | ... | ... | ... | ... | ... | ... | | | |
| | Yamethin | ... | ... | ... | ... | ... | ... | ... | | | |
| | Prome | ... | ... | ... | ... | ... | ... | ... | | | |
| | Dolla | ... | ... | ... | ... | ... | ... | ... | | | |
| | Thaon | ... | ... | ... | ... | ... | ... | ... | | | |
| | Mu (i) | ... | ... | ... | ... | ... | ... | ... | | | |
| TOTAL 1928-29 | 1st April 1928 to 31st March 1929. | 1006 46 | ... | 122 | ... | 800 52 | ... | 1474 11 | 102519 73 | Rs. A. P. 2,52,701 0 0 | Rs. 36,000 |
| " 1927-28 | 1st April 1927 to 31st March 1928. | 1271 50 | ... | 38 | ... | 1773 82 | ... | 8033 32 | 101075 02 | 2,25,330 0 0 | 36,000 |
| " 1926-27 | 1st April 1926 to 31st March 1927. | 477 | ... | 743 | ... | 162 | ... | 1882 | 97032 | 2,10,371 6 0 | 36,000 |
| " 1925-26 | 1st April 1925 to 31st March 1926. | 362 | ... | 215 | ... | 409 | ... | 1006 | 90600 | 2,46,933 2 0 | 36,000 |
| " 1924-25 | 1st April 1924 to 31st March 1925. | 756 | ... | 61 | ... | 305 | ... | 1212 | 95594 | 2,05,175 11 0 | 39,000 |

STATEMENT V.

Progress made in working plans.

| PROVINCE. | Area under sanctioned working plans. | | | | | Area not under working plans. | | | | Revisions. | | | |
|--|--------------------------------------|------------------------|---------------------------|-------------------|--|-------------------------------|------------------------------|--------------------------|---|------------------|-------------------------------------|---|---|
| | At commencement of the year. | Added during the year. | Deducted during the year. | At close of year. | | Plans under preparation. | Plans not under preparation. | | | Due or required. | In progress at the end of the year. | Revised plans sanctioned during the year. | Expenditure on working plans during the year. |
| | | | | Actual area. | Percentage of total forest area (as shown in column 10). | | Required at present. | Not required at present. | Total forest area in Statement I. (Total of columns 5, 7, 8 and 9). | | | | |
| | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | Sq. m. | Sq. m. | Sq. m. | Sq. m. | | Sq. m. | Sq. m. | Sq. m. | Sq. m. | Sq. m. | Sq. m. | Sq. m. | R. |
| Bengal | 6,816 | 1,005 | 1,103 | 6,811 | 61 | 1 | ... | 3,723 | 10,535 | ... | 4,776 | ... | 6,009 |
| United Provinces | 5,023 | 6 | 10 | 4,972 | 93 | 105 | 1 | 63 | 5,201 | .. | 1,465 | 702 | 41,424 |
| Punjab | 2,511 | ... | 3 | 2,508 | 47 | 200 | 1 | 2,033 | 6,242 | .. | 157 | 135 | 2 |
| Burma | 15,724 | 3,244 | 31 | 18,015 | 65 | 6,235 | 1,315 | 2,623 | (a) 23,109 | 13 | 3,777 | 1,101 | 69,637 |
| Federated Shan States | 1,138 | .. | .. | 1,138 | 37 | 57 | 44 | 1,600 | (a) 3,167 | 184 | ... | ... | ... |
| Bihar and Orissa | 2,044 | ... | ... | 2,044 | 65.21 | 124 | ... | 615 | 3,073 | ... | 323 | 94 | 1,763 |
| Assam | 240 | ... | ... | 240 | 1.2 | 1,707 | 2,854 | 15,491 | 23,477 | 314 | ... | ... | 7,407 |
| Central Provinces | 17,592 | 225 | 0 | 17,803 | 89 | ... | 22 | 2,111 | 19,641 | 535 | 1,554 | 3,346 | ... |
| Coorg | 519 | ... | ... | 519 | 100 | ... | ... | ... | 519 | 519 | 147 | ... | ... |
| North-West Frontier Province | 245 | ... | ... | 245 | 100 | ... | ... | ... | 245 | ... | 76 | ... | 2,457 |
| Ajmer | 141 | .. | .. | 141 | 100 | ... | ... | ... | 141 | ... | .. | ... | .. |
| Baluchistan | ... | ... | .. | ... | ... | ... | ... | 755 | 755 | .. | .. | .. | ... |
| Andamans | 703 | ... | ... | 703 | 32.4 | ... | ... | 1,182 | 2,109 | 254 | ... | ... | ... |
| Madras | 8,823 | 2,945 | ... | 8,768 | 46 | 3,511 | 2,524 | 4,378 | (b) 19,020 | ... | ... | ... | ... |
| Bombay | 8,335 | 226 | 212 | 8,349 | 67 | 373 | 600 | 3,230 | (c) 12,552 | 1,180 | 560 | 225 | 9,910 |
| TOTAL 1925-26 | 66,565 | 7,714 | 1,430 | 72,870 | 65.2 | 12,465 | 7,271 | 30,463 | 131,908 | 2,577 | 13,278 | 5,696 | 1,41,709 |
| " 1927-28 | 63,491 | 1,063 | 125 | 65,245 | 41.7 | 10,695 | 13,253 | 42,479 | 132,310 | 2,904 | 17,206 | 1,032 | 88,926 |
| " 1926-27 | 60,059 | 4,021 | 316 | 63,717 | 47.8 | 10,254 | 14,164 | 44,335 | 163,105 | 5,128 | 13,698 | 1,564 | 1,08,296 |
| " 1925-26 | 61,139 | 303 | 269 | 60,950 | 46.2 | 10,555 | 17,112 | 42,761 | 132,662 | 4,795 | 8,700 | 251 | 1,71,586 |
| " 1924-25 | 51,313 | 3,380 | 530 | 51,354 | 44.6 | 9,421 | 16,794 | 41,228 | 121,718 | 4,321 | 6,230 | 1,403 | 1,02,30 |

(a) Excluding unclassified forests.

(b) Includes 58 square miles of reserved lands and 45 square miles of leased forests under working plans, which if added to figures shown in column 3 of Statement I (excluding Tokadi leased forests 27 square miles) will agree with this total.

(c) Includes 23 square miles of Kanara Coast Division, which if added to figures shown in column 6 of Statement I (after deducting 2,586 square miles under Forest Department) will agree with this total.

STATEMENT VI.

Expenditure on communications and buildings.

| Province. | New Works. | | Repairs. | | Other Works. | Total. |
|--|------------|------------------|------------|------------------|--------------|-----------|
| | Buildings. | Roads and paths. | Buildings. | Roads and paths. | | |
| | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Bengal | 61,765 | 8,025 | 48,847 | 49,436 | 20,593 | 1,88,766 |
| United Provinces | 99,351 | 84,306 | 1,29,725 | 1,42,342 | 30,688 | 4,87,012 |
| Punjab | 68,793 | 16,587 | 27,182 | 84,204 | 15,478 | 1,64,194 |
| Barma | 2,45,786 | 3,75,366 | 1,21,791 | 1,67,125 | 86,820 | 9,96,888 |
| Federated Shan States | 6,926 | 9,628 | 5,185 | 4,819 | 1,191 | 27,749 |
| Bihar and Orissa | 58,009 | 30,037 | 26,258 | 36,097 | 11,468 | 1,61,864 |
| Assam | 68,407 | 44,461 | 16,581 | 1,41,237 | 23,547 | 3,34,236 |
| Central Provinces | 1,06,821 | 1,19,419 | 67,275 | 88,439 | 47,611 | 4,29,565 |
| Coorg | 5,443 | 6,417 | 6,319 | 5,351 | 1,895 | 26,085 |
| North-West Frontier Province | 20,611 | 19,265 | 2,823 | 4,891 | 1,495 | 49,085 |
| Ajmer | 2,639 | 699 | 258 | 1,280 | 745 | 5,621 |
| Baluchistan | 647 | — | 192 | 85 | — | 934 |
| Andamans | 56,935 | 2,450 | 9,904 | 697 | 60,667 | 1,30,663 |
| Madras | 1,12,475 | 89,239 | 60,225 | 99,914 | 12,053 | 3,79,926 |
| Bombay | 73,788 | 1,39,210 | 39,136 | 1,06,080 | 16,414 | 3,74,604 |
| Total 1928-29 | 9,88,396 | 8,98,325 | 6,07,229 | 8,82,607 | 3,30,695 | 87,07,252 |
| „ 1927-28 | 11,04,650 | 7,30,863 | 5,95,873 | 9,93,460 | 2,51,631 | 36,75,977 |
| „ 1926-27 | 9,46,939 | 8,27,657 | 5,54,748 | 8,85,997 | 2,56,612 | 34,71,948 |
| „ 1925-26 | 5,70,767 | 5,82,638 | 5,18,251 | 7,68,474 | 2,19,498 | 26,65,828 |
| „ 1924-25 | 8,72,745 | 6,65,589 | 5,10,374 | 7,07,558 | 2,01,766 | 29,58,602 |

STATEMENT VII.

Breaches of forest rules.

| Province. | | Cases pending from 1927-28. | New Cases of the year. | | | | | Total cases. | Disposed of during the year. | | | | | | Cases pending at close of year. |
|-------------------------------|-------|-----------------------------|---------------------------|---|--|-----------------|------------------------------|--------------|------------------------------|----------|-------------|----------|--------|----------|---------------------------------|
| | | | Injury to forest by fire. | Unauthorized felling or appropriation of wood and minor forest produce. | Grazing without permission, or in tracts in which grazing is prohibited. | Other offences. | Total new cases of the year. | | Conviction. | | Acquittals. | | Total. | | |
| | | | | | | | | | Cases. | Persons. | Cases. | Persons. | Cases. | Persons. | |
| 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| Bengal | A. | 54 | ... | 131 | 18 | 69 | 218 | 272 | 188 | 428 | 30 | 153 | 168 | 579 | 95 |
| | B. | 96 | 2 | 1,422 | 1,693 | 1,254 | 4,376 | 4,472 | 4,400 | 7,829 | 5 | 5 | 4,405 | 7,834 | 66 |
| | C. | ... | 34 | 286 | 6 | 19 | 345 | 345 | ... | ... | ... | ... | ... | ... | ... |
| | Total | 150 | 36 | 1,839 | 1,722 | 1,343 | 4,939 | 5,089 | 4,588 | 8,255 | 35 | 158 | 4,573 | 8,413 | 161 |
| United Provinces. | A. | 36 | 17 | 33 | 26 | 43 | 119 | 155 | 78 | 299 | 19 | 72 | 97 | 371 | 57 |
| | B. | 470 | 118 | 1,644 | 1,775 | 987 | 4,524 | 4,994 | 4,015 | 10,441 | 389 | 869 | 4,404 | 11,310 | 590 |
| | C. | ... | 190 | 70 | 13 | 42 | 315 | 315 | ... | ... | ... | ... | ... | ... | ... |
| | Total | 506 | 325 | 1,747 | 1,814 | 1,072 | 4,958 | 5,464 | 4,093 | 10,740 | 408 | 941 | 4,501 | 11,681 | 647 |
| Punjab | A. | 1,092 | 17 | 510 | 535 | 507 | 1,599 | 2,691 | 1,293 | 2,197 | 155 | 409 | 1,448 | 2,606 | 1,218 |
| | B. | 2,130 | 43 | 3,616 | 6,467 | 3,660 | 13,786 | 15,916 | 11,481 | 13,648 | ... | 1 | 11,481 | 13,649 | 2,207 |
| | C. | ... | 119 | 16 | 44 | 78 | 257 | 257 | ... | ... | ... | ... | ... | ... | ... |
| | Total | 3,222 | 179 | 4,172 | 7,046 | 4,245 | 15,642 | 18,864 | 12,774 | 15,845 | 155 | 410 | 12,929 | 16,255 | 3,425 |
| Burma | A. | ... | ... | 1,034 | 78 | 350 | 1,462 | 2,361 | 1,716 | 2,351 | 184 | 511 | 1,900 | 2,562 | ... |
| | B. | ... | 2 | 7,171 | 419 | 1,916 | 9,538 | 11,311 | 9,022 | 10,654 | ... | ... | 9,022 | 10,654 | ... |
| | C. | ... | ... | 64 | 7 | 8 | 79 | 79 | ... | ... | ... | ... | ... | ... | ... |
| | Total | *2,672 | 2 | 8,269 | 504 | 2,304 | 11,079 | 13,751 | 10,738 | 13,005 | 184 | 511 | 10,922 | 13,516 | *2,159 |
| Federated Shan States. | A. | ... | ... | ... | ... | 5 | 5 | 6 | 5 | 3 | 1 | 1 | 6 | 4 | ... |
| | B. | ... | ... | 107 | 15 | 15 | 137 | 150 | 117 | 141 | ... | ... | 117 | 141 | ... |
| | C. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Total | *14 | ... | 107 | 15 | 20 | 142 | 156 | 122 | 144 | 1 | 1 | 123 | 115 | *16 |
| Bihar and Orissa | A. | 69 | 13 | 166 | 33 | 61 | 272 | 341 | 201 | 541 | 62 | 267 | 263 | 808 | 21 |
| | B. | 171 | 3 | 1,673 | 321 | 59 | 2,356 | 2,227 | 2,106 | 5,243 | 1 | 1 | 2,107 | 5,244 | 104 |
| | C. | ... | 60 | 20 | ... | ... | 80 | 80 | ... | ... | ... | ... | ... | ... | ... |
| | Total | 240 | 76 | 1,859 | 353 | 120 | 2,408 | 2,648 | 2,307 | 5,784 | 63 | 268 | 2,370 | 6,052 | 125 |
| Assam | A. | 97 | ... | 170 | 11 | 70 | 251 | 343 | 249 | 396 | 30 | 112 | 279 | 508 | 66 |
| | B. | 211 | 2 | 1,000 | 40 | 595 | 1,547 | 1,761 | 1,573 | 2,308 | 2 | 5 | 1,575 | 2,313 | 186 |
| | C. | ... | 1 | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... |
| | Total | 311 | 3 | 1,170 | 51 | 575 | 1,799 | 2,110 | 1,822 | 2,704 | 32 | 117 | 1,854 | 2,821 | 252 |
| Central Provinces. | A. | 60 | 7 | 115 | 110 | 34 | 296 | 356 | 251 | 629 | 60 | 167 | 311 | 790 | 45 |
| | B. | 2,178 | 191 | 7,456 | 9,006 | 1,012 | 17,665 | 19,843 | 18,017 | 48,243 | 11 | 8 | 18,028 | 48,251 | 1,815 |
| | C. | ... | 622 | 730 | 60 | 55 | 1,482 | 1,482 | ... | ... | ... | ... | ... | ... | ... |
| | Total | 2,238 | 820 | 8,307 | 9,215 | 1,101 | 19,443 | 21,681 | 18,268 | 48,872 | 71 | 175 | 18,339 | 49,047 | 1,860 |
| Coorg | A. | 2 | ... | ... | 2 | 1 | 3 | 5 | 4 | 8 | 1 | 2 | 5 | 10 | ... |
| | B. | 1 | ... | 15 | 17 | 10 | 42 | 43 | 35 | 43 | 8 | 14 | 43 | 57 | ... |
| | C. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Total | 3 | ... | 15 | 19 | 11 | 45 | 48 | 39 | 51 | 9 | 16 | 48 | 67 | ... |
| North West Frontier Province. | A. | 184 | 18 | 63 | 59 | 19 | 178 | 362 | 197 | 347 | 32 | 76 | 229 | 423 | 128 |
| | B. | ... | 2 | 1,677 | 2,272 | 43 | 3,993 | 3,993 | 3,956 | 5,520 | ... | ... | 3,956 | 5,520 | 7 |
| | C. | ... | 15 | 17 | 20 | ... | 52 | 52 | ... | ... | ... | ... | ... | ... | ... |
| | Total | 184 | 35 | 1,770 | 2,351 | 61 | 4,223 | 4,407 | 4,183 | 5,867 | 32 | 76 | 4,215 | 5,913 | 135 |

* Burma and Federated Shan States have not shown separately "A", "B" and "C" in columns 2 and 15. They have given the totals only.

STATEMENT VII—contd.

Breaches of Forest rules—contd.

| Province. | | Cases pending from 1927-28. | New Cases of the year. | | | | | Total cases. | Disposed of during the year. | | | | | | Cases pending at close of year. |
|---------------|-------|-----------------------------|---------------------------|---|--|-----------------|------------------------------|--------------|------------------------------|----------|-------------|----------|---------|----------|---------------------------------|
| | | | Injury to forest by fire. | Unauthorized felling or appropriation of wood and minor forest produce. | Grazing without permission, or in tracts in which grazing is prohibited. | Other offences. | Total new cases of the year. | | Convictions. | | Acquittals. | | Totals. | | |
| | | | | | | | | | Cases. | Persons. | Cases. | Persons. | Cases. | Persons. | |
| 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| Ajmer | A. | 3 | ... | ... | 4 | 1 | 5 | 8 | 7 | 13 | 1 | 3 | 8 | 16 | ... |
| | B. | ... | 12 | 322 | 1,322 | 20 | 1,676 | 1,076 | 1,676 | 3,380 | ... | ... | 1,676 | 3,386 | .. |
| | C. | ... | 1 | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... |
| | Total | 3 | 13 | 323 | 1,326 | 21 | 1,682 | 1,685 | 1,683 | 3,399 | 1 | 3 | 1,684 | 3,402 | .. |
| Baluchistan | A. | 11 | ... | 15 | 14 | 3 | 33 | 43 | 27 | 70 | 4 | 11 | 31 | 90 | 12 |
| | B. | ... | ... | 83 | 177 | 7 | 222 | 222 | 222 | 309 | ... | ... | 222 | 309 | ... |
| | C. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Total | 11 | ... | 53 | 191 | 10 | 254 | 265 | 249 | 358 | 4 | 11 | 253 | 399 | 12 |
| Andamans | A. | 1 | ... | 4 | ... | ... | 4 | 5 | 5 | 5 | 1 | ... | 5 | 5 | ... |
| | B. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | C. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Total | 1 | ... | 4 | ... | ... | 4 | 5 | 5 | 5 | 1 | ... | 5 | 5 | ... |
| Madras | A. | 1,618 | 47 | 3,197 | 615 | 218 | 4,108 | 5,926 | 2,710 | 7,739 | 2,051 | 5,935 | 4,794 | 13,674 | 1,132 |
| | B. | 2,863 | 171 | 15,069 | 3,103 | 1,041 | 19,384 | 22,217 | 16,192 | 32,421 | 1,919 | 4,586 | 18,141 | 37,007 | 4,105 |
| | C. | 5 | 842 | 332 | 24 | 21 | 1,222 | 1,327 | ... | ... | ... | ... | ... | ... | ... |
| | Total | 4,656 | 1,060 | 18,598 | 3,773 | 1,283 | 24,714 | 29,460 | 18,902 | 40,160 | 4,053 | 10,521 | 22,935 | 50,681 | 5,237 |
| Bombay | A. | 193 | 37 | 226 | 77 | 94 | 434 | 627 | 380 | 836 | 62 | 152 | 442 | 936 | 155 |
| | B. | 1,022 | 232 | 8,513 | 6,391 | 2,095 | 17,211 | 18,263 | 16,481 | 37,765 | 4 | 6 | 16,485 | 37,771 | 1,778 |
| | C. | ... | 1,699 | 1,471 | 32 | 41 | 3,419 | 3,491 | ... | ... | ... | ... | ... | ... | .. |
| | Total | 1,215 | 2,168 | 10,213 | 6,500 | 2,223 | 21,124 | 22,381 | 16,861 | 38,601 | 66 | 158 | 16,927 | 38,759 | 1,963 |
| GRAND TOTAL | A. | 3,620 | 156 | 5,718 | 1,642 | 1,475 | 8,986 | 13,506 | 7,261 | 15,860 | 2,725 | 7,871 | 10,086 | 23,740 | 2,962 |
| | B. | 9,146 | 795 | 49,723 | 33,023 | 12,643 | 95,187 | 107,118 | 89,323 | 177,951 | 2,360 | 5,495 | 91,659 | 183,446 | 10,853 |
| | C. | 5 | 3,783 | 3,015 | 215 | 270 | 7,283 | 7,880 | ... | ... | ... | .. | .. | ... | ... |
| Total 1928-29 | | 12,770 | 4,737 | 55,451 | 34,860 | 11,388 | 112,456 | 128,004 | 96,584 | 193,520 | 5,091 | 13,308 | 101,745 | 207,186 | 13,820 |
| " 1927-28 | | 13,338 | 4,366 | 57,513 | 35,046 | 13,291 | 110,221 | 125,296 | 97,561 | 197,061 | 6,051 | 14,061 | 103,612 | 211,146 | 13,035 |
| " 1926-27 | | 12,424 | 4,035 | 57,263 | 36,033 | 12,653 | 110,160 | 124,617 | 95,676 | 188,907 | 5,615 | 14,030 | 101,291 | 212,937 | 13,329 |
| " 1925-26 | | 14,627 | 4,270 | 51,554 | 36,126 | 11,710 | 106,620 | 119,950 | 93,921 | 193,822 | 6,507 | 17,273 | 100,433 | 215,796 | 11,603 |
| " 1924-25 | | 16,413 | 4,397 | 53,402 | 34,013 | 10,134 | 101,685 | 116,325 | 90,469 | 192,171 | 6,017 | 15,878 | 96,456 | 213,650 | 12,625 |

N. B.—A. Cases taken into Court.

B. Cases compounded.

C. Undetected cases.

STATEMENT VIII.

Area protected from fire.

| Province. | Area in square miles. | | Percentage of forests under fire protection to total area of reserves. | Percentage of failure to area attempted. | | Remarks. |
|--|-----------------------|------------|--|--|----------|----------|
| | Attempted. | Protected. | | Average of past five years to 1927-28. | 1928-29. | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Bengal | 1,544 | 1,541 | 23.9 | 2.8 | 0.2 | |
| United Provinces | 3,278 | 3,223 | 63.5 | 1.9 | 1.6 | |
| Punjab | 1,322 | 1,316 | 86.3 | 1.04 | 0.4 | |
| Burma | 124 | 117 | 0.43 | 7.8 | 5.6 | |
| Federated Shan States | 4 | 4 | 0.13 | ... | ... | |
| Bihar and Orissa | 1,542 | 1,495 | 85.7 | 4.4 | 3.7 | |
| Assam | 65 | 50 | 1.06 | 52.6 | 23.0 | |
| Central Provinces | 11,588 | 10,994 | 58.9 | 5.8 | 5.1 | |
| Coorg | 186 | 185 | 35.8 | 2.8 | 0.5 | |
| North-West Frontier Province | 87 | 85 | 35.5 | 4.6 | 2.3 | |
| Ajmer | 140 | 139 | 99.3 | ... | 0.7 | |
| Madras | 15,108 | 14,374 | 79.8 | 2.9 | 4.8 | |
| Bombay | 9,007 | 8,489 | 65.7 | 3.7 | 5.8 | |
| Total 1928-29 | 43,993 | 41,993 | 41.1 | 3.6 | 4.5 | |
| " 1927-28 | 42,173 | 40,208 | 39.0 | 3.2 | 4.6 | |
| " 1926-27 | 38,814 | 37,659 | 36.0 | 9.0 | 2.0 | |
| " 1925-26 | 41,941 | 40,811 | 39.9 | 5.7 | 28.0 | |
| " 1924-25 | 44,201 | 42,847 | 42.6 | 10.0 | 3.1 | |

STATEMENT. IX.

Causes of forest fires.

| Province. | Fires originating in Departmental fire conservancy operations. | | External fires crossing the fire tracts. | | Fires due to carelessness of outsiders. | | Fires originating from intention or malice. | | Fires due to unknown causes. | | Total. | |
|--|--|--------|--|--------|---|--------|---|--------|------------------------------|--------|--------|--------|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1 | No. | Sq. M. | No. | Sq. M. | No. | Sq. M. | No. | Sq. M. | No. | Sq. M. | No. | Sq. M. |
| Bengal | 1 | ... | 5 | 2 | 17 | 1 | 1 | ... | 10 | ... | 34 | 3 |
| United Provinces | 51 | 5 | 40 | 10 | 105 | 16 | 31 | 18 | 49 | 6 | 276 | 55 |
| Punjab | 3 | ... | 19 | 2 | 117 | 2 | 53 | 8 | 4 | 1 | 193 | 8 |
| Burma | 6 | ... | 7 | 1 | 27 | 2 | 14 | 3 | 11 | 1 | 65 | 7 |
| Federated Shan States | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Bihar and Orissa | 10 | 0 | 11 | 7 | 13 | 0 | 2 | ... | 51 | 38 | 90 | 57 |
| Assam | 28 | 8 | 5 | 6 | 1 | ... | 1 | 1 | 1 | ... | 36 | 15 |
| Central Provinces | 81 | 13 | 181 | 106 | 210 | 145 | 16 | 4 | 503 | 325 | 974 | 593 |
| Coorg | 5 | ... | 2 | ... | ... | ... | 10 | ... | ... | ... | 17 | ... |
| North-West Frontier Province | ... | ... | 4 | ... | 7 | ... | 27 | 1 | ... | ... | 38 | 1 |
| Ajmer | 1 | ... | ... | ... | 10 | 1 | ... | ... | 1 | ... | 12 | 1 |
| Baluchistan | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Andamans | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Madras | 30 | 8 | 150 | 116 | 330 | 231 | 300 | 140 | 879 | 212 | 1,050 | 736 |
| Bombay | 29 | 12 | 202 | 163 | 676 | 117 | 143 | 12 | 1,135 | 315 | 2,168 | 619 |
| Total 1923-24 | 195 | 52 | 625 | 412 | 1,513 | 621 | 598 | 182 | 2,650 | 928 | 5,615 | 2,095 |
| " 1927-28 | 124 | 61 | 536 | 304 | 1,385 | 414 | 826 | 564 | 2,139 | 732 | 4,000 | 2,065 |
| " 1926-27 | 246 | 70 | 464 | 142 | 1,317 | 269 | 670 | 165 | 1,817 | 645 | 4,533 | 1,290 |
| " 1925-26 | 172 | 33 | 501 | 178 | 1,284 | 317 | 603 | 123 | 1,888 | 620 | 4,418 | 1,371 |
| " 1924-25 | 188 | 40 | 447 | 160 | 1,286 | 201 | 588 | 114 | 1,744 | 732 | 4,248 | 1,375 |

STATEMENT X.

Area closed and open to grazing.

| Area in Square Miles. | | | | | | | | |
|--|------------------------|---------------|------------------|---------------|---|---------------|--|---------|
| Province. | Closed to all animals. | | Open to grazing. | | | | Total area as shown in Statement No. I (Col. 6.) | |
| | Whole year. | Part of year. | Of all animals. | | Of all animals except browsers (camels, sheep and goats). | | | |
| | | | Whole year. | Part of year. | Whole year. | Part of year. | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| Bengal | 6,284 | ... | 4,125 | ... | 68 | 68 | 10,535 | |
| United Provinces | 2,051 | 70 | 2,221 | 10 | 821 | 28 | 5,201 | |
| Punjab | 382 | 95 | 4,198 | 138 | 840 | 189 | 5,341 | |
| Burma | 22,014 | .. | 58 | 185 | 2,455 | 4,448 | 122,074 | |
| Federated Shan States | 2,208 | ... | ... | 81 | 717 | 61 | 24,608 | |
| Bihar and Orissa | 613 | ... | 661 | ... | 1,560 | 236 | 3,073 | |
| Assam | 4,388 | ... | 14,497 | ... | 1,572 | ... | 20,407 | |
| Central Provinces | 2,938 | 54 | 3,440 | 12 | 13,214 | 42 | 19,641 | |
| Coorg | 60 | 439 | ... | ... | ... | 439 | 519 | |
| North-West Frontier Province | 68 | ... | 8 | ... | 174 | .. | 245 | |
| Ajmer | 57 | 81 | ... | ... | 3 | 61 | 141 | |
| Baluchistan | 174 | ... | 91 | 37 | ... | 11 | 785 | |
| Andamans | 52 | ... | ... | ... | 358 | ... | 2,190 | |
| Madras | 1,854 | 52 | 12,910 | 207 | 844 | 9 | 19,257 | |
| Bombay | 1,676 | 279 | 3,538 | ... | 9,412 | ... | 14,905 | |
| TOTAL | 1928-29 | 44,809 | 1,070 | 45,747 | 670 | 31,533 | 5,607 | 249,322 |
| | 1927-28 | 44,576 | 1,572 | 49,851 | 899 | 31,023 | 5,400 | 188,321 |
| | 1926-27 | 44,699 | 1,707 | 51,291 | 641 | 30,401 | 5,286 | 184,035 |
| | 1925-26 | 45,109 | 1,731 | 50,240 | 573 | 30,470 | 5,579 | 133,802 |
| | 1924-25 | 45,855 | 2,036 | 51,842 | 569 | 29,782 | 5,840 | 185,725 |

STATEMENT XI.
Protection from Cattle.

| Province. | Grazed on payment, number of animals. | | | | | | | | | |
|--|---------------------------------------|--------------------|------------------|---------|----------------|----------------------|--------------------|------------------|---------|----------------|
| | At full rates. | | | | | At privileged rates. | | | | |
| | Buffaloes. | Cows and bullocks. | Goats and sheep. | Camels. | Other animals. | Buffaloes. | Cows and bullocks. | Goats and sheep. | Camels. | Other animals. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Bengal | 2,687 | 24,671 | 204 | ... | 30 | 451 | 16,983 | ... | ... | 3 |
| United Provinces | 62,659 | 154,753 | 122,863 | 2,676 | 2,333 | 6,653 | 23,511 | 8,270 | 180 | 168 |
| Punjab | 11,717 | 40,845 | 453,917 | 21,395 | 616 | 343 | 9,320 | 470,964 | ... | 146 |
| Burma | 4,577 | 26,580 | ... | 17 | ... | ... | ... | ... | ... | ... |
| Federated Shan States | 3,612 | 1,408 | ... | ... | ... | ... | ... | ... | ... | ... |
| Bihar and Orissa | 9,810 | 20,125 | 1,898 | ... | 4 | 8,773 | 18,021 | ... | ... | ... |
| Assam | 12,913 | 5,884 | 373 | ... | 181 | 371 | ... | ... | ... | ... |
| Central Provinces | 279,126 | 705,836 | 351,371 | 37 | 3,336 | 141,167 | 1,841,672 | 1,503 | ... | 66 |
| Coorg | 872 | 3,366 | ... | ... | ... | ... | ... | ... | ... | ... |
| North-West Frontier Province | 2,631 | 4,351 | 368 | ... | 30 | ... | ... | ... | ... | ... |
| Ajmer | 1,711 | 12,660 | ... | 2 | ... | 4,598 | 16,540 | ... | ... | ... |
| Baluchistan | 27 | 1,962 | 9,007 | ... | 113 | ... | ... | ... | ... | ... |
| Madras | 81,000 | 1,079,878 | 989,860 | ... | 35 | 19,150 | 109,558 | 105,914 | ... | ... |
| Bombay | 28,690 | 86,742 | 145,778 | 753 | 5,991 | 231,162 | 1,077,297 | 374,052 | ... | 3,313 |
| Total 1928-29 | 501,532 | 2,171,010 | 2,075,638 | 24,870 | 12,669 | 412,668 | 3,112,907 | 969,838 | 180 | 3,596 |
| " 1927-28 | 495,896 | 2,142,272 | 1,802,245 | 57,641 | 14,667 | 396,818 | 3,082,466 | 1,016,694 | ... | 4,146 |
| " 1926-27 | 493,866 | 1,822,588 | 1,617,086 | 110,404 | 13,150 | 383,373 | 3,022,782 | 971,465 | 896 | 4,239 |
| " 1925-26 | 483,186 | 2,249,584 | 1,635,330 | 39,670 | 18,433 | 373,472 | 2,967,023 | 1,012,376 | 1,139 | 4,547 |
| " 1924-25 | 1,705,573 | | 1,552,369 | 61,763 | 13,467 | 9,337,314 | | 1,010,127 | 741 | 6,638 |

MENT XI.

from cattle.

| Grazed free, number of animals. | | | | | | | | | | | Total number of animals grazed. |
|---------------------------------|-----------------------|---------------------|---------|-------------------|---|-----------------------|------------------------|---------|-------------------|------------|--|
| By right under settlement. | | | | | During pleasure of Government or otherwise than under settlement. | | | | | | |
| Buffaloes. | Cows and bullocks. | Goats and sheep. | Camels. | Other animals. | Buffaloes. | Cows and bullocks. | Goats and sheep. | Camels. | Other animals. | | |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | |
| ... | ... | ... | ... | ... | 1,765 | 4,418 | 10 | ... | 18 | 51,245 | |
| 40,078 | 463,311 | 42,472 | ... | 1,420 | 7,390 | 36,961 | 61,306 | ... | 186 | 1,037,380 | |
| 132,118 | 657,700 | 1,831,349 | 325 | 199,162 | 6,708 | 31,700 | ... | 43 | 2,773 | 3,353,489 | |
| 169,470 | 293,323 | 120 | ... | 1,306 | 18,149 | 1,037 | ... | ... | 9,836 | 529,474 | |
| 1,860 | 20,073 | ... | ... | ... | 806 | 91 | ... | ... | 200 | 23,110 | |
| 42,313 | 244,447 | 78,156 | ... | 14 | 313 | 1,453 | 1,051 | ... | 30 | 426,403 | |
| 20 | 83 | ... | ... | ... | 5,012 | 7,274 | 2,609 | ... | ... | 34,733 | |
| ... | 375 | ... | ... | ... | 1,912 | 238,071 | 95 | ... | 189 | 3,564,755 | |
| 6 | 412 | ... | ... | ... | 1,374 | 16,208 | ... | ... | ... | 21,733 | |
| 5,806 | 6,099 | ... | ... | ... | 2 | 2 | ... | ... | ... | 19,449 | |
| 456 | 1,873 | ... | ... | ... | ... | ... | ... | ... | ... | 37,840 | |
| ... | 3,310 | 53,226 | 1 | 1,193 | ... | ... | ... | ... | ... | 68,839 | |
| 1,311 | 7,703 | 4,035 | ... | ... | 8,011 | 61,141 | 112 | ... | ... | 2,468,411 | |
| 2,412 | 6,082 | ... | ... | 11 | 85,432 | 446,695 | 637 | 1,010 | 3,561 | 2,501,865 | |
| 895,493 | 1,710,456 | 1,513,008 | 326 | 203,406 | 136,934 | 816,151 | 66,130 | 1,053 | 16,793 | 14,173,803 | |
| 339,531 | 1,037,046 | 1,468,673 | 326 | 203,418 | 140,034 | 843,760 | 70,536 | 9,762 | 17,168 | 12,974,041 | |
| 403,607 | 1,667,932 | 1,429,940 | 380 | 188,114 | 135,853 | 817,560 | 71,250 | 8,000 | 18,582 | 13,030,897 | |
| 388,352 | 1,739,384 | 1,451,429 | 386 | 190,344 | 130,600 | 823,434 | 69,778 | 5,178 | 13,600 | 13,561,541 | |
| 380,695 | 1,687,041 | 1,450,937 | 366 | 189,193 | 1,014,592 | | 118,427 | 1,600 | 10,028 | 18,614,219 | |

STATEMENT XII.

Progress on reproduction and afforestation.

| Province. | Area under regeneration at close of year. | Area on which regeneration was completed during the year. | Plantations not under working plans added during the year. | Expenditure during the year. |
|--|---|---|--|------------------------------|
| 1 | 2 | 3 | 4 | 5 |
| | Acres. | Acres. | Acres. | Rs. |
| Bengal | 362 | 2,227 | 21 | 70,377 |
| United Provinces | 2,24,802 | 18,096 | — | 1,45,767 |
| Punjab | 13,482 | 6,875 | 653 | 2,58,109 |
| Burma | 1,538 | 4,466 | * | 1,57,836 |
| Federated Shan States | 303 | 358 | * | 44,195 |
| Bihar and Orissa | 22,584 | 14,976 | 296 | 15,834 |
| Assam | 1,146 | — | 842 | 17,970 |
| Central Provinces | 13,411 | 537 | 1,353 | 4,791 |
| Coorg | 627 | 191 | 347 | 18,961 |
| North-West Frontier Province | 6,061 | 220 | 4 | 4,778 |
| Ajmer | 17,739 | 1,584 | — | 525 |
| Baluchistan | 70 | — | 1 | 1,022 |
| Andamans | — | — | 63 | 9,845 |
| Madras | 175 | 1,059 | 1,027 | 57,370 |
| Bombay | 69,572 | 38,950 | 11,709 | 75,266 |
| TOTAL 1928-29 | 371,962 | 84,030 | 16,321 | 8,91,455 |
| " 1927-28 | 304,210 | 57,240 | 18,033 | 8,24,113 |

* Included in Col. 2.

STATEMENT XIII.

Outturn of forest produce.

| Province. | Reserved Forests. | | Protected Forests. | | Unclassed Forests. | | TOTAL. | | Average Outturn per Square Mile. | | | | | | | |
|------------------------------|-------------------|----------------|--------------------|----------------|--------------------|----------------|------------------|----------------|----------------------------------|----------------|--------------------|----------------|--------------------|----------------|------------------|----------------|
| | Timber and fuel. | Minor produce. | Timber and fuel. | Minor produce. | Timber and fuel. | Minor produce. | Timber and fuel. | Minor produce. | Reserved Forests. | | Protected Forests. | | Unclassed Forests. | | TOTAL. | |
| | | | | | | | | | Timber and fuel. | Minor produce. | Timber and fuel. | Minor produce. | Timber and fuel. | Minor produce. | Timber and fuel. | Minor produce. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| | C. ft. | Rs. | C. ft. | Rs. | C. ft. | Rs. | C. ft. | Rs. | C. ft. | Rs. | C. ft. | Rs. | C. ft. | Rs. | C. ft. | Rs. |
| Bengal | (a) 80,959,000 | (a) 4,61,730 | 744,000 | 10,175 | 1,440,000 | 68,100 | 33,143,000 | 5,81,014 | 4,701 | 70 | 1,185 | 25 | 415 | 18 | 3,140 | 50 |
| United Provinces | (b) 34,805,000 | (b) 14,70,500 | 21,000 | 723 | 94,000 | 3,770 | 34,021,000 | 11,81,008 | 6,740 | 286 | 5,250 | 180 | 2,474 | 99 | 6,714 | 235 |
| Punjab | (b) 10,357,000 | (c) 14,36,830 | 15,936,000 | 12,03,303 | 6,302,000 | 64,036 | 82,501,000 | (d) 27,53,628 | 6,095 | 931 | 4,904 | 403 | 10,031 | 107 | 6,003 | 581 |
| Burma | 50,478,000 | 4,75,885 | ... | ... | 71,701,000 | 4,03,201 | 122,177,000 | 0,80,056 | 1,720 | 16 | ... | ... | 704 | 5 | 903 | 7 |
| Federated Shan States | 3,043,000 | 45,778 | ... | ... | 2,671,100 | 0,60,255 | 5,714,100 | 7,15,633 | 992 | 15 | ... | ... | 124 | 31 | 232 | 29 |
| Bihar and Orissa | 4,255,000 | 1,00,291 | 5,625,000 | 1,57,872 | ... | ... | 0,831,000 | 2,69,103 | 2,365 | 57 | 4,425 | 124 | ... | ... | 3,215 | 84 |
| Assam | (e) 7,741,000 | (e) 2,76,050 | ... | ... | 11,864,000 | 6,02,210 | 10,185,000 | 0,70,200 | 1,263 | 45 | ... | ... | 788 | 48 | 937 | 47 |
| Central Provinces | (b) 49,974,000 | (b) 32,12,350 | ... | ... | ... | ... | 40,878,000 | 82,62,350 | 2,386 | 165 | ... | ... | ... | ... | 2,386 | 165 |
| Coorg | 377,474 | 38,633 | 148,958 | 100 | ... | ... | 820,432 | 80,029 | 727 | 75 | ... | ... | ... | ... | 1,014 | 75 |
| North-West Frontier Province | (f) 2,045,000 | 1,14,355 | ... | ... | ... | ... | 2,048,000 | 1,14,355 | 12,032 | 407 | ... | ... | ... | ... | 12,032 | 407 |
| Ajmer | 405,345 | 50,508 | ... | ... | ... | ... | 405,345 | 50,508 | 2,874 | 360 | ... | ... | ... | ... | 2,874 | 360 |
| Baluchistan | 127,250 | 44,323 | ... | ... | 140,858 | 62 | 269,203 | 44,368 | 400 | 141 | ... | ... | 298 | ... | 342 | 55 |
| Andamans | 168,000 | 2,908 | ... | ... | 2,816,000 | 6,563 | 3,004,000 | 9,539 | 3,615 | 57 | ... | ... | 1,817 | 3 | 1,321 | 4 |
| Madras | (b) 18,170,000 | 8,65,301 | ... | ... | (g) 4,165,000 | 13,31,670 | 22,331,000 | 10,80,031 | 901 | 34 | ... | ... | 12,122 | 3,882 | 1,150 | 103 |
| Bombay | (b) 23,391,000 | 10,80,338 | 32,373,000 | 9,073 | 270,000 | ... | (h) 50,043,000 | 10,90,431 | 1,708 | 146 | 27,000 | 7 | ... | ... | 3,760 | 134 |
| TOTAL 1929-30 | 231,028,000 | 1,04,07,186 | 64,847,058 | 14,77,313 | 101,032,038 | 32,03,638 | 389,926,085 | 1,51,78,816 | 2,100 | 97 | 8,695 | 231 | 739 | 23 | 1,50 | 60 |
| " 1927-28 | 247,038,315 | 1,03,91,058 | 25,000,167 | 14,71,021 | 97,080,255 | 26,48,751 | 370,173,707 | 1,40,15,303 | 2,345 | 97 | 3,277 | 103 | 700 | 18 | 1,480 | 57 |
| " 1930-27 | 348,248,014 | 90,01,563 | 21,480,407 | 25,42,078 | 92,800,535 | 29,81,282 | 361,035,000 | 1,45,67,003 | 2,359 | 80 | 3,101 | 202 | 660 | 21 | 1,443 | 5 |
| " 1925-26 | 341,011,023 | 23,05,275 | 25,603,135 | 23,02,410 | 94,730,803 | 37,29,370 | 361,704,051 | 1,43,00,001 | 2,204 | 88 | 3,090 | 571 | 692 | 10 | 1,438 | 78 |
| " 1924-25 | 237,028,004 | 1,07,01,000 | 26,533,050 | 12,40,007 | 91,123,147 | 17,05,433 | 265,262,860 | 1,37,18,501 | 2,200 | 108 | 3,205 | 151 | 773 | 18 | 1,110 | 60 |

(a) Includes leased lands.
 (b) " " forests.
 (c) " " Rs. 510, on account of fruit culture.
 (d) " " 1,51,777 profit on sale for 1927-28.
 (e) " " Shared forests.
 (f) " " Shared forests.
 (g) Reserved and unreserved lands.

(h) Sandal wood—
 Kh. Mds. lbs.
 630 17 27½
 89 30 18 white wood billets, etc.
 155 c.ft. Beamed wood.
 8 cubic rejected pieces.
 1,300 trees.
 128 rejected roots.
 210 birches.
 614 cart loads badli shales.
 174 Maunds bechi shales.

STATEMENT XIV.

Forest produce removed by different agencies.

Part I.—Timber and Fuel.

| Province. | Timber. | | | | | Fuel. | | | | |
|--|---------------------|-------------------|----------------------|----------------------|-------------|---------------------|-------------------|----------------------|----------------------|-------------|
| | By Govern- ment. | By purchasers. | By free grantees. | By right holders. | TOTAL. | By Govern- ment. | By purchasers. | By free grantees. | By right holders. | TOTAL. |
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1 | C. ft. | C. ft. | C. ft. | C. ft. | C. ft. | C. ft. | C. ft. | C. ft. | C. ft. | C. ft. |
| Bengal | 231,000 | 17,850,000 | 10,000 | ... | 18,506,000 | 1,018,000 | 13,123,000 | 453,000 | ... | 14,594,000 |
| United Provinces | 316,000 | 8,158,000 | 65,000 | 583,000 | 9,422,000 | 343,000 | 11,301,000 | 1,015,000 | 12,940,000 | 14,298,000 |
| Madras | 1,116,000 | 2,040,000 | 64,000 | 1,274,000 | 4,574,000 | 1,650,000 | 2,768,000 | 16,000 | 23,603,000 | 27,981,000 |
| Burma | 3,742,000 | 87,553,000 | 235,000 | 2,524,000 | 96,139,000 | 590,000 | 21,414,000 | 63,000 | 637,000 | 22,783,000 |
| Federated Shan States | 4,200 | 4,582,400 | 12,400 | 222,400 | 4,799,000 | 71,000 | 292,000 | ... | 552,700 | 915,700 |
| Punjab and Orissa | 153,000 | 2,068,000 | 82,000 | 400,000 | 2,772,000 | 169,000 | 2,337,000 | 89,000 | 4,344,000 | 7,109,000 |
| Assam | 353,000 | 10,169,000 | 637,000 | ... | 11,054,000 | 303,000 | 3,569,000 | 3,667,000 | 7,000 | 5,941,000 |
| Central Provinces | 6,007,000 | 4,521,000 | 212,000 | 1,000 | 11,271,000 | 13,241,000 | 20,109,000 | 2,125,000 | 132,000 | 36,697,000 |
| Coorg | 135,316 | 120,059 | ... | ... | 255,375 | 101,109 | 160,518 | ... | ... | 271,627 |
| North-West Frontier Province | 851,000 | 60,000 | 5,000 | 4,000 | 913,000 | 342,000 | 143,000 | 1,220,000 | 816,000 | 2,035,000 |
| Ajmer | ... | 4,677 | ... | 23 | 4,909 | 101,658 | 208,778 | ... | ... | 407,436 |
| Pakistan | 1,004 | 1,918 | 1,559 | ... | 4,511 | 20,331 | 263,122 | 240 | ... | 283,697 |
| Andamans | 2,014,000 | 6,000 | 42,000 | 407,000 | 2,469,000 | 85,000 | 36,000 | 334,000 | 80,000 | 535,000 |
| Malwa | 1,720,000 | 2,447,000 | 552,000 | 15,000 | 4,724,000 | 1,445,000 | 16,084,000 | 70,000 | ... | 17,600,000 |
| Dorbar | 1,628,000 | 4,630,000 | 50,000 | 300,000 | 6,528,000 | 3,033,000 | 27,374,000 | 140,000 | 8,270,000 | 40,517,000 |
| Total 1918-29 | 21,166,520 | 144,556,204 | 1,900,659 | 6,106,432 | 173,765,195 | 23,290,003 | 132,378,553 | 6,405,210 | 61,033,700 | 218,101,593 |
| 1927-28 | 17,508,231 | 108,000,512 | 2,266,140 | 3,009,417 | 137,077,590 | 23,520,541 | 144,127,096 | 10,112,250 | 65,205,669 | 243,000,177 |
| 1928-29 | 18,479,735 | 102,220,245 | 1,000,845 | 8,692,007 | 126,514,633 | 19,174,573 | 117,304,579 | 10,003,320 | 42,005,600 | 227,471,272 |
| 1929-30 | 6,000,112 | 71,100,000 | 1,414,400 | 4,212,373 | 67,726,885 | 14,600,570 | 127,480,520 | 8,862,163 | 51,754,500 | 236,287,153 |
| 1930-31 | 10,310,000 | 61,352,000 | 2,172,231 | 2,370,238 | 115,917,637 | 16,782,147 | 161,227,762 | 7,520,103 | 51,970,400 | 229,382,609 |

STATEMENT XIV.—*contd.*Forest produce removed by different agencies—*contd.*

Part II.—Value of minor forest produce.

| Province. | Bamboos. | | | | | Grazing and Todder Grass. | | | | | Other Minor produce. | | | | |
|-------------------------------|---------------------|---------------------|----------------------|----------------------|-----------|---------------------------|---------------------|----------------------|----------------------|-----------|----------------------|---------------------|----------------------|----------------------|-----------|
| | By Govern- ment. | By purcha- sers. | By free grantees. | By right holders. | Total. | By Govern- ment. | By purcha- sers. | By free grantees. | By right holders. | Total. | By Govern- ment. | By purcha- sers. | By free grantees. | By right holders. | Total. |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Bengal . . . | 651 | 1,50,943 | 646 | ... | 1,52,440 | ... | 30,008 | 34,078 | ... | 70,744 | 41,283 | 2,67,470 | 2,001 | ... | 3,10,320 |
| United Provinces . | 3,583 | 1,63,190 | 101 | 7,303 | 1,64,206 | 1,324 | 1,70,940 | 14,133 | 2,78,077 | 1,74,474 | 3,05,070 | 4,73,709 | 23,983 | 72,107 | 8,14,869 |
| Punjab . . . | 33,192 | 11 | 23 | 580 | 33,806 | 78 | 1,40,031 | 68,021 | 20,12,350 | 22,17,140 | 4,61,037 | 22,034 | 17 | 44,039 | 5,32,876 |
| Burma . . . | 557 | 2,77,510 | 5 | 10,351 | 2,88,939 | 30 | 18,507 | 51,200 | 1,51,693 | 2,21,000 | 10,015 | 3,03,108 | 9 | 55,305 | 4,28,407 |
| Federated Shan States. | ... | 9,107 | ... | 3,033 | 12,230 | ... | 3,072 | 6,400 | 6,600 | 10,037 | 52 | 0,87,593 | ... | 10,422 | 6,83,765 |
| Bihar and Orissa . | 7,701 | 35,238 | 1,500 | 5,110 | 49,609 | ... | 12,483 | 1,210 | 1,12,716 | 1,26,446 | 20,149 | 57,364 | 210 | 4,439 | 82,158 |
| Assam . . . | 243 | 83,534 | 18,939 | ... | 1,01,760 | ... | 42,390 | 10,244 | 110 | 01,760 | 2,151 | 0,23,323 | 1,80,264 | ... | 6,00,783 |
| Central Provinces . | 6,850 | 4,10,323 | 6,003 | 4,528 | 4,28,560 | 2,638 | 16,01,910 | 1,50,870 | 3,70,333 | 22,33,737 | 2,06,150 | 3,30,078 | 38,846 | 14,020 | 5,00,012 |
| Coorg . . . | 45 | 2,162 | ... | ... | 2,207 | ... | 1,070 | 1,387 | 64 | 2,527 | ... | 31,204 | 1 | ... | 31,295 |
| North-West Frontier Province. | ... | ... | ... | ... | ... | ... | 6,140 | 00 | 5,087 | 13,802 | 90,784 | 830 | ... | 100 | 1,00,433 |
| Ajmer . . . | ... | 710 | ... | ... | 710 | 1,080 | 10,746 | 1,451 | 23,837 | 40,730 | 414 | 3,012 | ... | ... | 3,436 |
| Baluchistan . . . | ... | ... | ... | ... | ... | ... | 1,223 | 1 | 41,470 | 43,004 | 83 | 1,032 | 20 | ... | 1,604 |
| Andamans . . . | 438 | 41 | 1,804 | 197 | 2,010 | ... | ... | ... | ... | ... | 641 | 1,000 | 4,500 | 310 | 7,510 |
| Madras . . . | 10,250 | 3,67,141 | 2,313 | 520 | 4,01,243 | 333 | 6,87,439 | 13,763 | 7,187 | 0,78,712 | 11,020 | 6,66,055 | 7,440 | 060 | 9,00,977 |
| Bombay . . . | 1,718 | 1,71,377 | 935 | 40,813 | 2,23,933 | ... | 7,61,567 | 15,500 | 6,03,670 | 11,91,240 | 15,240 | 2,14,530 | 0,170 | 42,331 | 2,78,253 |
| TOTAL 1928-29 . | 65,636 | 17,10,291 | 34,135 | 81,712 | 18,91,664 | 0,890 | 80,07,677 | 3,77,003 | 37,12,754 | 77,01,201 | 11,58,010 | 30,43,251 | 2,63,643 | 2,51,240 | 15,82,356 |
| " 1927-28 . | 55,100 | 10,64,114 | 40,804 | 80,751 | 16,80,865 | 0,087 | 33,46,521 | 3,60,270 | 39,05,841 | 70,82,331 | 13,60,140 | 30,10,053 | 2,51,018 | 1,00,044 | 51,02,164 |
| " 1926-27 . | 70,107 | 10,06,890 | 38,211 | 77,090 | 18,68,397 | 27,036 | 55,63,027 | 43,07,110 | 32,30,500 | 71,01,771 | 11,62,171 | 38,05,027 | 2,50,533 | 1,02,404 | 65,07,736 |
| " 1925-26 . | 82,620 | 10,13,768 | 29,327 | 05,814 | 18,50,538 | 10,517 | 30,86,287 | 3,74,363 | 32,82,033 | 73,53,120 | 10,80,845 | 30,07,060 | 2,37,613 | 2,00,030 | 51,08,983 |
| " 1924-25 . | 1,00,720 | 15,07,220 | 33,479 | 53,220 | 10,08,838 | 14,145 | 30,03,635 | 3,87,300 | 33,00,637 | 70,14,020 | 10,85,007 | 33,44,621 | 2,33,471 | 2,01,145 | 47,07,314 |

STATEMENT XV.

Exports of forest produce.

| Articles of forest produce. 1 | Quantity in tons of 20 cwt. (in the case of teak and other timbers, cubic tons). | | Valuation at port of shipment in 1928-29. | |
|---|---|-------------|---|--------------|
| | Average of 5 years 1923-24 to 1927-28. | In 1928-29. | Total. | Per ton. |
| | 2 | 3 | 4 | 5 |
| Caoutchouc, raw | 9,309 | 11,529 | Rs. 1,99,85,495 | Rs. 1,733 |
| Button | 988 | 1,236 | 34,40,808 | 2,794 |
| Lac | 19,702 | 26,537 | 6,81,61,168 | 2,569 |
| Shell | 5,192 | 9,397 | 1,48,24,118 | 1,578 |
| Stick, seed and other kinds | 2,464 | 2,353 | 9,28,046 | 394 |
| Catch and gambier | 70,118 | 61,534 | 80,44,314 | 131 |
| Myrabolams | 334 | 381 | 20,50,819 | 5,383 |
| Cardamums | 880 | 960 | 17,28,121 | 1,800 |
| Sandal | 51,349 | 52,591 | 1,46,70,056 | 279 |
| Teak | — | — | 10,91,059† | — |
| Other kinds of wood and timber* | — | — | — | — |
| TOTAL 1928-29 | ... | ... | 13,49,23,946 | ... |
| " 1927-28 | ... | ... | 12,73,46,767 | ... |
| " 1926-27 | ... | ... | 10,63,30,002 | ... |
| " 1925-26 | ... | ... | 12,84,97,718 | ... |
| " 1924-25 | ... | ... | 11,43,32,316 | ... |

* Quantity not recorded.

† Includes teak keys.

STATEMENT XV (a).

| Year (calendar). | Imports of timber into British India, 1925-1929. | | Imports of sleepers of wood for railways into British India, 1925-1929. | |
|------------------|---|------------|---|-----------|
| | Cubic tons. | Rs. | Tons. | Rs. |
| 1925 | ‡131,156 | 28,70,856 | 14,238 | 14,91,246 |
| 1926 | ‡23,104 | ‡27,49,637 | 25,734 | 31,17,949 |
| 1927 | ‡26,002 | ‡33,44,387 | 14,704 | 16,60,677 |
| 1928 | ‡23,860 | ‡28,90,525 | 1,950 | 2,27,845 |
| 1929 | ‡26,544 | ‡31,83,932 | 8 | 1,232 |

‡ Represent figures for deal and pine wood, jarrah wood and teak wood only from April 1925.

STATEMENT XVI.

Estimated value of forest produce given away free or at reduced rates.

| Provinces. | Timber. | Fuel. | Bamboos. | Grass and grazing. | Other minor produce. | Total. |
|--|-----------------|------------------|-----------------|--------------------|----------------------|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Bengal | 3,283 | 64,765 | 40,280 | 40,635 | 2,061 | 1,51,054 |
| United Provinces | 1,24,000 | 1,24,000 | 8,000 | ... | 54,000 | 3,10,000 |
| Punjab | 70,105 | 7,53,986 | ... | ... | 21,15,935 | 29,40,026 |
| Burma | 47,462 | 777 | 10 | 51,200 | 4 | 99,453 |
| Federated Shan States | 2,041 | ... | ... | 6,499 | ... | 8,540 |
| Bihar and Orissa | 12,737 | 872 | 1,506 | 2,924 | 1,511 | 19,550 |
| Assam | 87,978 | 51,906 | 18,989 | 19,363 | 1,80,254 | 3,07,000 |
| Central Provinces | 23,496 | 55,702 | 12,288 | 13,48,236 | 38,682 | 14,63,554 |
| Coorg | ... | ... | ... | 4,673 | ... | 4,673 |
| North-West Frontier Province | 2,285 | 37,710 | ... | 5,683 | ... | 45,878 |
| Ajmer | 12 | ... | ... | 24,988 | ... | 25,000 |
| Baluchistan | 500 | 5 | ... | 30 | ... | 535 |
| Andamans | 54,697 | 3,886 | 1,520 | ... | 4,909 | 65,011 |
| Madras | 85,965 | 8,172 | 3,088 | 17,256 | 7,555 | 1,22,036 |
| Bombay | 96,241 | 1,70,342 | 50,702 | 7,09,249 | 46,726 | 10,75,260 |
| TOTAL, 1923-29 | 5,55,802 | 12,71,552 | 1,66,383 | 22,30,938 | 21,53,827 | 60,58,502 |
| " 1927-28 | 6,02,630 | 15,10,201 | 1,45,106 | 22,07,418 | 24,33,463 | 69,58,964 |
| " 1926-27 | 5,91,572 | 14,36,747 | 1,42,861 | 21,52,169 | 21,34,531 | 67,57,880 |
| " 1925-26 | 5,47,210 | 13,20,108 | 1,47,126 | 24,93,462 | 24,22,153 | 69,30,059 |
| " 1924-25 | 4,68,001 | 13,18,840 | 96,891 | 44,72,409 | 3,79,190 | 67,31,240 |

STATEMENT XVII.

Details of revenue and expenditure for the forest year 1928-29.
(Excluding Burma and Federated Shan States.)

| | | Rs. | Percentage of each item to total. | |
|---|--|-------------|-----------------------------------|---|
| Gross Receipts | (a) Wood | 2,88,51,843 | 72.7 | |
| | (b) Minor forest produce | 33,00,254 | 9.6 | |
| | (c) Forest stamps and Commutation fees for forest produce | 93,311 | 0.2 | |
| | (d) Grazing | 35,49,905 | 8.8 | |
| | (e) Revenue from forests not managed by Government | 1,90,672 | 0.5 | |
| | (f) Miscellaneous | 32,00,505 | 8.03 | |
| | Total Revenue | | 3,97,03,000 | — |
| A. Recurring | (a) Administration { (i) Superior Staff | 1,37,92,150 | 51.8 | |
| | { (ii) Subordinate Staff (including Rangers, Foresters and Guards). | | | |
| | { (iii) Office Establishments (including Contingencies). | | | |
| | (b) Working { (1) Extraction | 70,41,216 | 26.5 | |
| | | | | { (2) Roads and Buildings |
| | | | | { (3) Fire protection |
| | | | | { (4) Cultural operations |
| | | | | { (5) Live-stock, stores and plant |
| | | | | { (6) Working-Plans |
| | | | | { (7) Rent for leased forests |
| | (c) Expenditure on realization of revenue from forests not managed by Government. | 25,330 | 0.0 | |
| | | | | (d) Forest Science and Education (including all "A" and "B" charges of Imperial Forest College and Research Institute). |
| | | | | 25,311 | 0.0 |
| | Total | | 2,47,41,678 | — |
| B. Extraordinary | (e) Forest Settlement | 18,567 | 0.0 | |
| | (f) Forest Survey | 20,961 | 0.0 | |
| | (g) Forest Demarcation | 1,03,311 | 0.4 | |
| | (h) Gain or loss by Exchange on English transactions, interest on capital outlay, etc. | 3,20,140 | 1.2 | |
| | (i) Share of Capital charges transferred to B-A | 11,25,641 | 5.3 | |
| | Total | | 13,91,820 | — |
| GRAND TOTAL OF EXPENDITURE | | 2,66,36,198 | — | |
| Net Revenue | | 1,80,72,502 | — | |
| (Excluding Burma and Federated Shan States) | | | | |

* Expenditure under this head in provinces has been included in (a) Administration.

STATEMENT XVII(a).

Details of revenue and expenditure for the forest year 1928-29.

(Burma and Federated Shan States only.)

| | | Rs. | Percentage of each item to total. | |
|---|--|---|-----------------------------------|-----------|
| Gross Receipts | (a) Wood | 1,44,00,435 | 79.5 | |
| | (b) Minor forest produce | 10,70,635 | 5.9 | |
| | (c) Grazing | 22,579 | 0.1 | |
| | (d) Revenue from forests not managed by Government | 2,41,539 | 1.3 | |
| | (e) Miscellaneous | 23,64,885 | 13.0 | |
| Total Revenue | | 1,81,00,143 | .. | |
| A Recurring | (a) Administration. | (i) Superior Staff | 47,91,787 | 56.8 |
| | | (ii) Subordinate Staff (including Rangers, Foresters and Guards). | | |
| | | (iii) Office Establishments (including Contingencies). | | |
| | (b) Working | (1) Extraction | 4,40,440 | 5.2 |
| | | (2) Roads and Buildings | 3,33,376 | 3.9 |
| | | (3) Fire protection | 32,228 | 0.3 |
| | | (4) Live-stock, stores and plant | 2,36,901 | 2.6 |
| | | (5) Working Plans, revision and maintenance. | 23,990 | 0.2 |
| | | (6) Maintenance of boundaries | 36,545 | 0.4 |
| | | (7) Regeneration and improvement | 1,81,020 | 2.1 |
| | | (8) Silvicultural Research | 11,451 | 0.1 |
| | | (9) Utilisation Research | ... | ... |
| | | (10) Other Works | 1,03,647 | 1.2 |
| | | (11) Miscellaneous | 1,14,400 | 1.3 |
| | | Total | | 63,05,785 |
| B Extraordinary | (c) Forest Survey | ... | ... | |
| | (d) Gain or loss by Exchange on English transactions, interest on capital outlay, etc. | 6,44,009 | 7.6 | |
| | (e) Share of capital charges transferred to S-A | 14,74,977 | 17.5 | |
| | Total | | 21,18,986 | ... |
| GRAND TOTAL OF EXPENDITURE | | 84,24,771 | ... | |
| Net Revenue | | 96,75,372 | ... | |
| (Burma and Federated Shan States only.) | | | | |

Summary of revenue and expenditure of the

| Budget Heads. | Imperial. | Bengal. | United Provinces. | Punjab. | Barma (includes Federated Shan States and backward tracts). | Bihar and Orissa (includes Angul Division). | Assam. |
|---|-----------|-----------|-------------------|-----------|---|---|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| REVENUE. | | | | | | | |
| I.—Timber and other produce removed from the forests by Government agency. | ... | 5,98,674 | 9,77,151 | 25,11,037 | 3,50,472 | 89,700 | 8,41,465 |
| II.—Timber and other produce removed from the forests by consumers or purchasers. | ... | 23,66,077 | 51,36,209 | 4,57,407 | 1,48,00,935 | 10,38,467 | 25,09,335 |
| III.—Drift and waif wood and confiscated forest produce. | ... | 19,689 | 3,117 | 85,576 | 3,42,262 | 658 | 21,172 |
| IV.—Revenue from forests not managed by Government. | ... | ... | 34,009 | 3,030 | 2,41,589 | ... | 85,012 |
| V.—Miscellaneous | ... | 1,33,417 | 27,615 | 4,70,975 | 23,64,885 | 18,386 | 3,07,869 |
| TOTAL REVENUE | ... | 81,16,837 | 61,80,391 | 35,28,025 | 1,81,00,143 | 10,97,161 | 37,67,878 |
| EXPENDITURE. | | | | | | | |
| A.—CONSERVANCY AND WORKS. | | | | | | | |
| I.—Timber and other produce removed from the forests by Government Agency. | ... | 2,46,430 | 3,37,377 | 9,93,538 | 1,73,322 | 13,508 | 7,10,353 |
| II.—Timber and other produce removed from the forests by consumers or purchasers. | ... | 2,07,853 | 2,32,579 | 1,739 | 1,06,838 | 29,960 | 35,917 |
| III.—Drift and waif wood and confiscated forest produce. | ... | 3,265 | 505 | 27,716 | 70,760 | ... | 981 |
| IV.—Revenue from forests not managed by Government. | ... | ... | 24,016 | ... | ... | 8 | ... |
| V.—Rent of leased forests and payments to shareholders in forests managed by Government. | ... | ... | 6,333 | 1,05,397 | ... | 26,720 | 1,19,629 |
| VI.—Live-stock, stores, tools and plant . . . | ... | 24,006 | 92,078 | 11,890 | 2,86,001 | 2,381 | 25,920 |
| VII.—Communications and buildings . . . | ... | 1,18,942 | 3,38,507 | 67,979 | 3,33,376 | 70,470 | 2,14,879 |
| VIII.—Demeritation, improvements and extension of forests. | ... | 1,11,016 | 3,55,312 | 94,901 | 3,88,881 | 42,912 | 28,815 |
| IX.—Miscellaneous | 916 | 16,701 | 17,478 | 3,153 | 1,14,500 | 15,001 | 15,035 |
| Total A—Conservancy and Works | 916 | 7,62,152 | 14,02,225 | 18,08,603 | 15,13,998 | 2,00,963 | 11,51,462 |
| B.—ESTABLISHMENTS. | | | | | | | |
| Total B.—Establishments (includes salaries, travelling and other allowances and contingencies). | 58,445 | 8,15,605 | 16,72,337 | 11,10,264 | 47,91,767 | 4,94,815 | 7,79,811 |
| C.—Total gain or loss by exchange on English transactions, interest on capital outlay, etc. | ... | 183 | 67,991 | 65,443 | 6,44,009 | 23,183 | 21,393 |
| D.—Total share of Capital charges transferred to B-A (i.e., Capital charges met from Revenue). | ... | 1,04,251 | 1,01,143 | 9 | 14,71,977 | 1,31,406 | 1,69,700 |
| E.—Total Capital Outlay under B-A (i.e., not transferred to B-A). | ... | ... | ... | 1,08,650 | ... | ... | 7,896 |
| GRAND TOTAL OF EXPENDITURE (Excluding expenditure under E.) | 59,361 | 16,82,191 | 32,43,716 | 21,93,319 | 84,24,771 | 8,50,373 | 21,22,366 |
| SURPLUS (Excluding expenditure under E.) | ... | 14,36,166 | 29,36,675 | 10,34,706 | 96,75,472 | 2,46,788 | 16,45,607 |
| DEFICIT | 59,361 | ... | ... | ... | ... | ... | ... |
| Proportion of surplus to gross revenue . . . | ... | ... | 46 | 47 | 29 | 53 | 43 |
| Net revenue per square mile of forest area under control of Forest Department. | ... | 186 | 565 | 193 | 60 | 60 | 81 |

MENT XVIII.

Forest Department in India for the financial year 1928-29.

| Central Provinces. | Goorg. | North-West Frontier Province. | Ajmer. | Baluchistan. | Andamans. | Forest College and Research Institute. | Madras. | Bombay. | Total. |
|-----------------------|----------|-------------------------------------|--------|--------------|-----------|---|-----------|---------------|--------------|
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| 16,45,717 | 4,27,841 | 7,81,037 | 87,410 | 6,001 | 14,88,436 | ... | 17,97,674 | 26,78,650 | 1,41,81,085 |
| 84,11,058 | 72,855 | 17,969 | 41,532 | 10,897 | 2,797 | ... | 32,73,879 | 42,19,633 | 3,78,60,535 |
| 1,390 | ... | 2,562 | ... | ... | ... | ... | 10,949 | 2,897 | 4,93,472 |
| 84,687 | ... | 3,241 | ... | 4,712 | ... | ... | ... | 25,961 | 4,32,261 |
| 8,53,469 | 25,340 | 24,563 | 8,682 | 2,315 | 9,478 | 1,06,001 | 10,72,771 | 4,15,874 | 53,41,790 |
| 54,46,816 | 5,25,636 | 8,29,877 | 87,924 | 23,425 | 15,00,706 | 1,06,001 | 61,54,773 | 78,43,035 | 5,78,69,148 |
| 5,43,662 | 49,007 | 5,38,364 | 21,673 | 3,015 | 8,11,506 | ... | 5,14,015 | 12,84,429 | 61,89,035 |
| 2,21,330 | ... | ... | 805 | ... | 660 | ... | 1,76,706 | 54,201 | 11,88,088 |
| 79 | ... | 669 | ... | ... | ... | ... | 351 | 231 | 1,04,568 |
| ... | ... | ... | ... | 284 | ... | ... | ... | 902 | 25,330 |
| 12,524 | ... | 24,130 | ... | ... | ... | ... | 524 | 46,514 | 8,41,780 |
| 29,034 | 19,520 | ... | 345 | 100 | 2,18,130 | 16,682 | 1,21,186 | 27,817 | 8,28,830 |
| 1,86,832 | 14,126 | 33,644 | 13,866 | 934 | 14,425 | 5,444 | 1,52,587 | 1,54,279 | 17,17,820 |
| 2,06,773 | 30,878 | 6,351 | 2,520 | 1,478 | 38,650 | ... | 98,489 | 1,24,099 | 15,94,109 |
| 55,859 | 4,211 | (a)—508 | 500 | 645 | 11,777 | 1,89,680 | 14,970 | 1,31,488 | 5,91,489 |
| 18,15,643 | 1,16,737 | 6,02,650 | 39,718 | 6,456 | 10,95,148 | 2,11,956 | 10,78,853 | 17,78,533 | 1,25,81,044 |
| 23,33,616 | 1,35,857 | 1,52,189 | 81,845 | 30,422 | 1,65,653 | 6,87,084 | 23,97,620 | (b) 24,43,336 | 1,86,09,153 |
| ... | 46 | ... | ... | ... | ... | ... | 1,05,544 | 42,657 | 9,70,449 |
| ... | 12,993 | 80,146 | 4,792 | ... | 68,120 | 42,607 | 4,77,481 | 2,32,607 | 29,00,618 |
| 2,95,661 | ... | ... | ... | ... | ... | ... | ... | ... | (c) 7,71,856 |
| 36,43,259 | 2,65,133 | 8,34,035 | 76,355 | 36,878 | 13,28,927 | 9,41,787 | 45,59,503 | 44,92,445 | 3,50,61,269 |
| 17,97,657 | 2,60,503 | ... | 11,569 | ... | 1,71,779 | ... | 15,95,270 | 28,50,590 | 2,86,61,982 |
| ... | ... | 5,558 | ... | 13,453 | ... | 8,35,786 | ... | ... | 9,14,108 |
| 33 | 40 | ... | 13 | ... | 11 | ... | 26 | 38 | 41 |
| 21 | 602 | ... | 82 | ... | 78 | ... | 82 | 191 | 95 |

(a) Work advances after deducting expenditure under LX miscellaneous.

(b) Includes Rs 1,34,616 on account of expenditure in England by the High Commissioner.

(c) Not included in Grand Total of expenditure.

Revenue of the Forest Department throughout India for the 30 financial years

(I) REVE

| Province. | Average of 1868-70 to 1873-74. | Average of 1874-75 to 1878-79. | Average of 1879-80 to 1883-84. | Average of 1884-85 to 1888-89. | Average of 1889-90 to 1893-94. | Average of 1894-95 to 1898-99. | 1899-1900. | 1900-01. | 1901-02. | 1902-03. | 1903-04. | 1904-05. |
|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Imperial . . . | 2,175 | 31,717 | 25,420 | 10,866 | 5,147 | 2,688 | 6,090 | 2,463 | 3,484 | 3,659 | 7,455 | 3,768 |
| Bengal* . . . | 1,64,363 | 2,89,772 | 1,06,578 | 6,31,384 | 7,66,431 | 10,49,364 | 11,38,910 | 12,33,839 | 12,92,237 | 12,56,247 | 10,65,323 | 11,67,472 |
| United Provinces . . . | 12,59,979 | 12,21,650 | 11,34,616 | 14,63,525 | 16,89,100 | 15,31,824 | 16,14,740 | 15,65,463 | 17,15,508 | 20,23,321 | 20,80,416 | 23,37,818 |
| Punjab . . . | 6,87,423 | 7,05,538 | 7,37,338 | 9,11,950 | 9,00,417 | 11,30,510 | 14,00,770 | 13,50,842 | 14,47,538 | 15,80,408 | 17,17,797 | 16,71,443 |
| Burma . . . | 8,91,293 | 14,20,175 | 19,88,356 | 25,01,318 | 49,78,654 | 66,15,543 | 78,12,050 | 60,54,444 | 58,73,938 | 67,39,053 | 82,68,135 | 89,59,756 |
| Bihar and Orissa . . . | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Assam† . . . | ... | 1,01,098 | 1,91,867 | 2,32,055 | 3,82,730 | 4,15,912 | 5,68,100 | 5,49,521 | 5,12,903 | 5,80,200 | 6,75,732 | 6,15,677 |
| Central Provinces and Berar . . . | 7,11,879 | 9,79,936 | 12,81,992 | 14,11,163 | 16,98,505 | 13,75,958 | 12,97,490 | 12,65,614 | 15,79,116 | 16,84,428 | 19,38,033 | 20,13,459 |
| Coorg . . . | 92,491 | 78,887 | 1,03,170 | 1,13,021 | 1,53,136 | 1,53,456 | 1,62,410 | 1,37,596 | 1,70,212 | 1,94,730 | 2,24,031 | 1,93,037 |
| North-West Frontier Province . . . | ... | ... | ... | ... | ... | ... | ... | ... | 13,012 | 1,01,123 | 1,01,833 | 90,991 |
| Ajmer . . . | 65 | 1,152 | 4,475 | 11,859 | 15,233 | 14,102 | 10,270 | 10,646 | 6,665 | 9,736 | 13,684 | 17,297 |
| Baluchistan . . . | ... | ... | 8,556 | 10,973 | 17,098 | 15,330 | 17,060 | 16,956 | 14,712 | 19,336 | 18,363 | 22,555 |
| Andamans . . . | 5,467 | 4,485 | 31,840 | 57,633 | 2,79,028 | 2,51,438 | 2,60,600 | 2,77,886 | 2,60,903 | 3,20,035 | 4,32,331 | 6,20,796 |
| Imperial Forest College and Research Institute . . . | ... | ... | ... | 397 | 1,636 | 3,010 | 3,210 | 3,637 | 3,515 | 3,252 | 3,038 | 3,537 |
| Forest Surveys (Imperial) . . . | ... | 17 | 130 | 206 | 668 | 900 | 429 | 327 | 473 | 3,031 | 431 | ... |
| Madras . . . | 6,03,243 | 5,88,369 | 8,06,020 | 13,00,481 | 17,14,328 | 31,10,938 | 23,02,290 | 23,40,170 | 25,43,430 | 24,13,819 | 26,57,727 | 28,23,216 |
| Bombay . . . | 11,77,673 | 12,28,561 | 18,33,818 | 30,11,314 | 33,54,893 | 30,46,241 | 24,15,200 | 29,61,029 | 23,70,723 | 23,29,156 | 27,51,539 | 30,20,558 |
| GRAND TOTAL . . . | 56,80,061 | 66,60,397 | 88,17,213 | 1,16,68,148 | 1,59,49,014 | 1,77,15,756 | 1,90,09,610 | 1,97,70,493 | 1,78,23,715 | 1,94,71,540 | 2,22,16,717 | 2,40,29,959 |

| Province. | 1917-18. | 1918-19. | 1919-20. | 1920-21. | 1921-22. | 1922-23. |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Imperial . . . | 51,720 | 27,458 | 31,527 | 27,122 | 27,803 | 26,553 |
| Bengal . . . | 13,76,909 | 10,41,104 | 20,51,237 | 21,81,763 | 16,98,959 | 23,11,226 |
| United Provinces . . . | 61,16,637 | 66,37,160 | 71,71,951 | 87,79,781 | 86,46,677 | 83,72,803 |
| Punjab . . . | 21,17,770 | 21,54,178 | 38,45,878 | 38,05,058 | 49,91,178 | 34,44,448 |
| Burma . . . | 1,23,61,499 | 1,25,28,853 | 1,64,35,262 | 1,89,75,060 | 2,21,16,787 | 1,69,49,053 |
| Bihar and Orissa . . . | 7,53,625 | 9,44,763 | 8,17,458 | 8,10,602 | 9,00,873 | 8,61,904 |
| Assam . . . | 13,09,956 | 11,02,718 | 14,51,500 | 15,31,944 | 12,97,027 | 17,13,553 |
| Central Provinces and Berar . . . | 34,66,493 | 34,88,422 | 45,46,723 | 43,91,526 | 41,33,693 | 47,06,979 |
| Coorg . . . | 4,58,673 | 6,77,873 | 9,48,028 | 4,37,851 | 7,33,701 | 9,42,653 |
| North-West Frontier Province . . . | 3,37,711 | 3,81,822 | 4,03,541 | 2,10,779 | 5,74,858 | 7,27,659 |
| Ajmer . . . | 27,733 | 37,260 | 34,914 | 48,112 | 40,812 | 43,973 |
| Baluchistan . . . | 17,831 | 25,168 | 17,037 | 22,511 | 17,229 | 14,039 |
| Andamans . . . | 7,93,656 | 11,84,383 | 8,00,795 | 6,24,374 | 5,50,093 | 5,88,027 |
| Imperial Forest College and Research Institute . . . | 8,301 | 9,033 | 8,305 | 12,648 | 24,117 | 1,84,763 |
| Forest Surveys (Imperial) . . . | ... | ... | ... | ... | ... | ... |
| Madras . . . | 54,58,489 | 47,91,450 | 62,44,149 | 53,81,216 | 48,69,171 | 52,72,956 |
| Bombay . . . | 63,12,023 | 1,04,91,031 | 84,94,438 | 69,98,565 | 74,93,563 | 70,37,584 |
| GRAND TOTAL . . . | 4,09,69,257 | 4,68,18,231 | 5,36,75,739 | 5,41,43,425 | 5,83,13,071 | 5,52,14,073 |

* Includes figures up to 1910-11 for districts subsequently transferred to Bihar and Orissa.
† Includes figures up to 1910-11 for Eastern Bengal districts subsequently transferred to Assam.
(c) Includes Federated Shan States.

MENT XIX.

from 1899-1900 to 1928-29 and the average of 6 quinquennial periods from 1869-70 to 1898-99.

NUE.

| 1905-06. | 1906-07. | 1907-08. | 1908-09. | 1909-10. | 1910-11. | 1911-12. | 1912-13. | 1913-14. | 1914-15. | 1915-16. | 1916-17. | Province. |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---|
| Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | |
| 7,255 | ... | 7,068 | 8,189 | 10,632 | 8,662 | 10,080 | 12,837 | 11,471 | 12,047 | 23,457 | 24,546 | Imperial. |
| 11,18,542 | 10,65,859 | 11,97,050 | 11,84,845 | 10,50,640 | 11,07,444 | 11,22,442 | 16,00,601 | 15,16,111 | 13,01,496 | 11,45,610 | 12,32,779 | Bengal.* |
| 24,33,423 | 25,02,664 | 24,09,745 | 21,75,406 | 23,01,164 | 23,78,439 | 30,16,100 | 35,43,963 | 37,12,487 | 31,35,235 | 37,38,531 | 50,40,932 | United Provinces. |
| 17,81,653 | 16,05,284 | 14,57,449 | 12,88,792 | 10,32,639 | 12,17,988 | 18,10,077 | 12,39,033 | 13,54,013 | 14,38,005 | 17,37,288 | 16,87,801 | Punjab. |
| 1,03,29,860 | 98,12,519 | 86,63,080 | 91,92,032 | 83,55,077 | 1,00,70,117 | 99,07,594 | 1,09,22,395 | 1,14,25,430 | 97,07,694 | 96,99,217 | 1,23,79,531 | Burma. |
| ... | ... | ... | ... | ... | ... | 4,07,218 | 4,38,959 | 4,91,783 | 5,49,770 | 5,17,727 | 5,29,081 | Bihar and Orissa. |
| 11,06,096 | 12,20,592 | 14,30,447 | 14,46,388 | 15,54,782 | 18,90,035 | 11,46,320 | 11,42,091 | 10,97,969 | 8,32,877 | 10,55,052 | 11,48,621 | Assam.† |
| 24,49,181 | 24,01,150 | 22,90,128 | 20,78,162 | 20,78,340 | 21,14,220 | 25,49,854 | 31,71,815 | 31,86,453 | 32,72,529 | 32,78,262 | 33,71,578 | Central Provinces and Berar. |
| 2,45,419 | 2,35,909 | 2,74,756 | 2,21,830 | 2,13,129 | 2,70,056 | 2,95,170 | 2,81,652 | 3,29,227 | 1,99,237 | 4,49,155 | 4,87,314 | Coorg. |
| 1,28,529 | 1,53,214 | 2,38,490 | 1,22,782 | 1,73,305 | 2,05,942 | 1,58,171 | 2,37,183 | 2,66,741 | 2,38,013 | 1,86,815 | 2,40,935 | North-West Frontier Province. |
| 15,002 | 18,335 | 29,864 | 27,615 | 23,990 | 33,846 | 26,361 | 36,506 | 33,597 | 31,170 | 23,445 | 21,272 | Ajmer. |
| 21,481 | 21,195 | 21,829 | 23,305 | 18,720 | 23,212 | 20,117 | 20,159 | 19,958 | 19,058 | 21,638 | 18,277 | Baluchistan. |
| 5,82,511 | 6,07,037 | 2,19,822 | 2,02,018 | 2,59,477 | 4,16,773 | 5,22,169 | 4,49,025 | 4,45,811 | 3,39,248 | 4,31,784 | 6,40,711 | Andamans. |
| 3,080 | 4,579 | 6,137 | 4,680 | 4,909 | 4,080 | 5,550 | 7,611 | 5,806 | 8,617 | 6,095 | 8,199 | Imperial Forest College and Research Institute. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | Forest Surveys (Imperial). |
| 29,87,604 | 32,90,609 | 39,93,680 | 38,00,919 | 41,78,331 | 38,80,411 | 41,68,921 | 41,12,473 | 42,00,320 | 39,41,637 | 41,06,636 | 45,06,126 | Madras. |
| 88,84,093 | 84,22,451 | 86,46,177 | 85,87,356 | 87,57,656 | 87,18,224 | 93,30,569 | 49,92,519 | 51,03,156 | 46,80,242 | 47,01,269 | 55,19,177 | Bombay. |
| 2,66,74,593 | 2,61,91,456 | 2,53,92,970 | 2,51,56,799 | 2,60,25,794 | 2,74,05,454 | 2,90,57,359 | 3,22,09,809 | 3,39,01,545 | 2,97,09,784 | 3,11,10,367 | 3,70,61,930 | Grand Total. |

| 1923-24. | 1924-25. | 1925-26. | 1926-27. | 1927-28. | 1928-29. | Province. |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|
| Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | |
| 29,551 | 39,100 | ... | ... | ... | ... | Imperial. |
| 22,61,515 | 24,75,529 | 28,56,420 | 31,28,841 | 33,49,480 | 31,18,957 | Bengal. |
| 73,56,029 | 69,21,937 | 64,26,231 | 59,71,803 | 72,01,153 | 61,80,391 | United Provinces. |
| 43,56,533 | 37,27,812 | 41,12,076 | 39,07,731 | 31,91,217 | 35,28,025 | Punjab. |
| (a) 1,94,02,899 | (a) 1,96,77,524 | (a) 2,23,46,618 | (a) 2,35,91,060 | (a) 2,21,07,668 | (a) 1,81,00,143 | Burma. |
| 10,29,085 | 10,70,298 | 10,23,592 | 9,43,752 | 9,39,760 | 10,97,161 | Bihar and Orissa. |
| 19,74,202 | 24,78,756 | 30,39,140 | 31,83,473 | 36,13,460 | 37,07,873 | Assam. |
| 51,04,929 | 52,32,632 | 49,87,409 | 53,21,376 | 50,78,160 | 54,46,816 | Central Provinces and Berar. |
| 7,00,947 | 6,68,030 | 5,38,618 | 4,58,145 | 4,99,372 | 5,25,030 | Coorg. |
| 5,33,332 | 6,69,767 | 7,44,207 | 7,91,166 | 7,56,700 | 8,29,377 | North-West Frontier Province. |
| 55,422 | 60,062 | 72,759 | 66,934 | 76,515 | 87,924 | Ajmer. |
| 22,403 | 20,593 | 23,621 | 27,942 | 29,867 | 23,425 | Baluchistan. |
| 8,11,882 | 7,25,597 | 8,91,029 | 11,70,863 | 14,18,062 | 15,09,706 | Andamans. |
| 1,67,330 | 1,02,579 | 1,05,097 | 2,74,025 | 1,16,167 | 1,06,001 | Imperial Forest College and Research Institute. |
| ... | ... | ... | ... | ... | ... | Forest Surveys (Imperial). |
| 54,15,557 | 55,62,632 | 51,70,520 | 56,23,709 | 59,44,491 | 61,51,773 | Madras. |
| 71,49,604 | 73,07,904 | 75,23,038 | 76,56,420 | 72,04,094 | 73,43,035 | Bombay. |
| 5,62,90,319 | 5,67,44,682 | 5,98,70,825 | 6,19,61,731 | 6,13,09,186 | 5,76,09,143 | Grand Total. |

* Orissa.
† Bengal.

(b) Excludes Rs. 52,151 deducted on account of Refunds.

Expenditure of the Forest Department throughout India for the 30 financial years

(II) EXPEN

| Province. | Average of 1869-70 to 1873-74. | Average of 1874-75 to 1878-79. | Average of 1879-80 to 1883-84. | Average of 1884-85 to 1888-89. | Average of 1889-90 to 1893-94. | Average of 1894-95 to 1898-99. | 1899-1900. | 1900-01. | 1901-02. | 1902-03. | 1903-04. | 1904-05. |
|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Imperial* . . . | 63,685 | 67,102 | 80,454 | 87,185 | 84,125 | 82,516 | 96,550 | 83,578 | 79,539 | 85,017 | 59,345 | 83,058 |
| Bengal† . . . | 1,11,084 | 2,12,024 | 3,55,147 | 3,94,347 | 4,04,147 | 5,38,652 | 5,45,210 | 5,70,806 | 6,57,131 | 6,38,014 | 7,03,508 | 6,88,559 |
| United Provinces . . . | 9,63,005 | 8,39,709 | 8,38,653 | 9,17,898 | 9,46,423 | 9,35,078 | 9,42,380 | 9,63,439 | 10,08,739 | 10,13,998 | 10,81,438 | 13,01,533 |
| Punjab . . . | 8,29,326 | 5,57,148 | 5,41,242 | 6,44,372 | 6,46,374 | 7,50,224 | 12,11,460 | 8,87,348 | 9,38,835 | 9,60,095 | 11,56,415 | 10,12,354 |
| Burma . . . | 4,02,847 | 8,12,279 | 10,12,512 | 13,22,424 | 16,72,383 | 21,20,642 | 24,47,440 | 26,54,717 | 26,46,457 | 23,00,203 | 33,52,404 | 31,46,024 |
| Bihar and Orissa . . . | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Assam‡ . . . | ... | 88,293 | 1,02,460 | 2,11,655 | 2,68,159 | 2,86,870 | 3,57,140 | 3,47,972 | 3,20,112 | 3,27,493 | 4,25,484 | 5,03,056 |
| Central Provinces and Berar . . . | 3,99,072 | 4,33,734 | 6,13,539 | 7,37,805 | 10,10,657 | 11,78,680 | 12,75,820 | 11,65,860 | 12,00,904 | 12,57,288 | 12,90,990 | 13,20,615 |
| Coorg . . . | 40,684 | 95,591 | 62,248 | 73,907 | 77,016 | 82,146 | 74,220 | 70,905 | 82,333 | 89,437 | 92,191 | 63,820 |
| North-West Frontier Province . . . | ... | ... | ... | ... | ... | ... | ... | ... | 19,510 | 54,086 | 60,603 | 74,938 |
| Ajmer . . . | 6,197 | 16,692 | 13,197 | 17,620 | 14,061 | 16,722 | 15,350 | 16,762 | 15,927 | 16,377 | 16,680 | 15,641 |
| Baluchistan . . . | ... | ... | 12,591 | 16,180 | 39,452 | 33,508 | 26,680 | 29,254 | 24,460 | 23,240 | 21,697 | 24,672 |
| Andamans . . . | 739 | 481 | 5,129 | 41,108 | 1,76,189 | 1,85,423 | 1,40,940 | 1,40,137 | 2,04,867 | 2,81,702 | 2,66,121 | 3,42,431 |
| Imperial Forest College and Research Institute . . . | ... | ... | ... | 23,746 | 45,023 | 65,120 | 73,550 | 71,238 | 76,290 | 66,333 | 50,369 | 61,124 |
| Forest Surveys (Imperial) . . . | 11,911 | 63,288 | 40,447 | 24,477 | 24,491 | 31,936 | 33,930 | 33,991 | 33,720 | 33,953 | 33,933 | 23,239 |
| Madras . . . | 4,58,834 | 5,76,976 | 6,20,660 | 10,67,521 | 12,85,113 | 15,06,756 | 16,53,530 | 17,15,431 | 17,09,554 | 18,35,553 | 17,50,930 | 19,86,098 |
| Bombay . . . | 6,43,046 | 8,70,487 | 12,51,292 | 18,41,812 | 19,09,789 | 19,61,582 | 21,28,430 | 24,08,581 | 17,19,680 | 16,76,441 | 17,75,937 | 19,03,804 |
| GRAND TOTAL . . . | 39,33,430 | 45,76,804 | 56,09,579 | 74,26,956 | 86,03,352 | 97,96,140 | 1,10,24,680 | 1,11,60,040 | 1,07,46,368 | 1,12,49,331 | 1,21,66,993 | 1,20,67,856 |

| Province. | 1917-18. | 1918-19 | 1919-20. | 1920-21. | 1921-22. | 1922-23. |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Imperial* | 90,332 | 1,16,638 | 1,32,777 | 1,68,993 | 2,57,011 | 4,83,494 |
| Bengal | 7,39,712 | 8,25,835 | 9,72,307 | 13,39,750 | 12,68,122 | 12,31,249 |
| United Provinces | 32,04,926 | 45,08,963 | 61,53,475 | 70,43,678 | 74,04,683 | 61,58,486 |
| Punjab | 11,58,048 | 17,05,804 | 24,16,120 | 35,75,719 | 43,76,076 | 49,06,671 |
| Burma | 51,87,179 | 56,91,982 | 65,38,200 | 73,07,014 | 90,83,094 | 99,72,149 |
| Bihar and Orissa | 3,90,716 | 4,30,849 | 5,06,800 | 5,89,118 | 9,94,665 | 7,17,531 |
| Assam | 6,86,627 | 6,93,961 | 8,21,717 | 9,66,601 | 9,91,511 | 11,14,634 |
| Central Provinces and Berar | 18,72,124 | 20,15,548 | 23,76,230 | 27,33,601 | 27,15,521 | 30,34,417 |
| Coorg | 1,99,941 | 4,25,572 | 5,07,547 | 4,66,756 | 6,30,645 | 5,66,007 |
| North-West Frontier Province | 1,53,875 | 2,07,857 | 3,01,453 | 4,54,187 | 7,49,384 | 6,12,383 |
| Ajmer | 26,504 | 28,538 | 47,352 | 37,417 | 41,320 | 89,840 |
| Baluchistan | 20,990 | 28,787 | 25,314 | 23,761 | 53,275 | 36,463 |
| Andamans | 3,97,724 | 6,12,826 | 9,71,491 | 13,27,830 | 12,67,027 | 8,05,184 |
| Imperial Forest College and Research Institute | 2,69,694 | 2,93,048 | 3,18,503 | 4,57,484 | 7,82,624 | 7,89,586 |
| Forest Surveys (Imperial) | 56,597 | 59,110 | 59,953 | 90,448 | 1,07,113 | 1,19,935 |
| Madras | 30,20,349 | 31,82,520 | 36,93,348 | 45,30,480 | 51,15,356 | 47,63,463 |
| Bombay | 33,53,714 | 73,72,197 | 59,18,682 | 53,05,022 | 50,23,946 | 40,14,344 |
| Grand Total | 2,11,57,063 | 2,88,75,505 | 3,17,63,109 | 3,64,19,907 | 4,08,51,878 | 3,93,12,041 |

* Includes pay of Inspector-General of Forests, Assistant Inspector-General of Forests.
† Includes figures up to 1910-11 for districts subsequently transferred to Bihar and
‡ Includes figures up to 1910-11 for Eastern Bengal districts subsequently transferred
(a) Includes Federated Shan States.

MENT XIX—contd.

from 1899-1900 to 1928-29 and the average of 6 quinquennial periods from 1869-70 to 1898-99.

DITURE.

| 1905-06. | 1906-07. | 1907-08. | 1908-09. | 1909-10. | 1910-11. | 1911-12. | 1912-13. | 1913-14. | 1914-15. | 1915-16. | 1916-17. | Province. |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---|
| Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | |
| 83,767 | 95,472 | 1,00,204 | 1,04,183 | 1,04,332 | 92,606 | 91,711 | 1,01,162 | 99,296 | 99,478 | 1,09,502 | 1,03,248 | Imperial.* |
| 5,93,509 | 6,33,886 | 7,13,394 | 5,83,981 | 5,91,099 | 6,43,285 | 7,06,874 | 6,69,794 | 6,40,157 | 6,70,935 | 5,93,635 | 6,19,619 | Bengal.† |
| 14,05,182 | 18,00,851 | 11,04,018 | 12,22,436 | 12,00,808 | 12,37,936 | 13,63,673 | 16,29,264 | 18,90,014 | 23,17,740 | 25,66,807 | 27,35,915 | United Provinces. |
| 12,65,664 | 11,44,403 | 11,76,696 | 8,51,027 | 6,67,752 | 7,40,512 | 7,65,146 | 7,93,176 | 9,19,177 | 8,60,302 | 9,23,878 | 9,34,662 | Punjab. |
| 39,86,063 | 36,59,753 | 35,51,532 | 37,17,247 | 36,83,618 | 36,42,700 | 41,31,162 | 41,38,584 | 42,74,901 | 46,80,447 | 49,56,241 | 49,36,568 | Burma |
| ... | ... | ... | ... | ... | ... | 8,00,516 | 8,75,894 | 8,55,648 | 8,81,371 | 8,61,550 | 4,47,972 | Bihar and Orissa |
| 5,93,910 | 7,07,860 | 8,00,873 | 8,91,349 | 10,12,541 | 10,57,340 | 8,41,013 | 6,08,911 | 9,10,240 | 8,98,339 | 7,55,214 | 6,76,093 | Assam.‡ |
| 13,07,158 | 13,42,893 | 15,83,407 | 17,53,307 | 15,89,832 | 15,89,333 | 13,38,379 | 10,46,735 | 10,58,129 | 19,36,569 | 17,34,336 | 17,68,775 | Central Provinces and Berar. |
| 95,748 | 1,02,855 | 1,01,819 | 99,595 | 1,07,822 | 1,07,679 | 1,21,171 | 1,01,511 | 1,78,514 | 1,75,633 | 1,78,633 | 1,60,492 | Coorg. |
| 95,258 | 92,850 | 88,400 | 61,413 | 77,391 | 72,492 | 89,436 | 1,22,178 | 1,31,023 | 1,25,639 | 1,04,795 | 1,18,070 | North-West Frontier Province. |
| 17,131 | 16,715 | 16,188 | 19,916 | 19,272 | 19,018 | 22,313 | 29,714 | 23,595 | 21,733 | 25,132 | 26,634 | Ajmer. |
| 25,743 | 26,323 | 31,253 | 36,566 | 20,540 | 26,387 | 28,917 | 23,527 | 25,310 | 26,000 | 27,935 | 26,929 | Baluchistan. |
| 3,35,985 | 2,95,136 | 2,29,267 | 1,80,941 | 1,94,159 | 2,26,063 | 2,61,732 | 2,55,141 | 2,74,676 | 2,58,056 | 4,30,332 | 4,23,052 | Andamans. |
| 80,669 | 1,87,456 | 1,58,038 | 1,89,191 | 1,90,174 | 2,19,188 | 2,63,411 | 2,68,445 | 2,93,338 | 3,31,091 | 2,78,518 | 3,05,493 | Imperial Forest College and Research Institute. |
| 80,044 | 30,389 | 27,060 | 30,128 | 41,062 | 41,140 | 38,798 | 35,809 | 37,743 | 42,353 | 43,663 | 47,407 | Forest Surveys (Imperial). |
| 22,26,602 | 24,80,660 | 27,80,637 | 29,17,261 | 33,80,635 | 32,23,801 | 34,14,682 | 31,50,462 | 30,35,817 | 28,60,085 | 29,27,318 | 28,42,678 | Madras. |
| 21,26,093 | 19,90,183 | 19,55,437 | 20,43,873 | 20,63,088 | 20,70,417 | 26,61,430 | 26,91,455 | 25,89,877 | 21,67,925 | 20,42,038 | 23,64,681 | Bombay. |
| 1,42,20,521 | 1,40,62,819 | 1,45,12,983 | 1,47,26,034 | 1,49,20,651 | 1,52,44,023 | 1,69,46,566 | 1,72,07,810 | 1,75,43,456 | 1,82,06,450 | 1,85,02,607 | 1,87,43,888 | GRAND TOTAL. |

| 1923-24. | 1924-25. | 1925-26. | 1926-27. | 1927-28. | 1928-29. | Province. |
|-----------------|-------------|-------------|-------------|-------------|-------------|---|
| Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | |
| 1,41,489 | 1,68,505 | 1,18,903 | 1,23,658 | 61,661 | 59,961 | Imperial.* |
| 12,42,672 | 14,17,471 | 12,60,968 | 17,34,761 | 17,02,453 | 16,82,191 | Bengal. |
| 49,50,695 | 36,84,005 | 36,95,346 | 33,73,409 | 39,93,303 | 32,48,716 | United Provinces. |
| 29,16,035 | 26,14,468 | 27,01,510 | 27,03,386 | 29,51,874 | 21,63,319 | Punjab. |
| (a) 1,03,02,150 | 96,28,818 | 86,87,943 | 89,40,821 | 88,87,853 | 84,24,771 | Burma. |
| 7,50,657 | 7,30,397 | 6,65,624 | 10,83,009 | 6,63,374 | 8,50,373 | Bihar and Orissa. |
| 11,59,815 | 13,80,383 | 15,67,983 | 14,47,500 | 14,45,767 | 21,22,366 | Assam. |
| 30,41,108 | 31,71,863 | 37,45,729 | 36,48,601 | 31,09,468 | 36,49,259 | Central Provinces and Berar. |
| 5,65,598 | 3,58,751 | 3,05,395 | 2,84,770 | 2,59,186 | 2,65,188 | Coorg. |
| 4,58,567 | 5,88,713 | 5,47,821 | 6,40,719 | 6,91,414 | 6,34,935 | North-West Frontier Province. |
| 49,454 | 49,125 | 55,161 | 70,728 | 62,854 | 76,855 | Ajmer. |
| 31,440 | 30,478 | 31,356 | 32,422 | 34,010 | 36,578 | Baluchistan. |
| 8,96,214 | 11,58,690 | 11,85,068 | 12,20,097 | 14,50,084 | 13,28,027 | Andamans. |
| 7,75,642 | 8,26,365 | 8,14,033 | 8,90,598 | 9,35,864 | 9,41,787 | Imperial Forest College and Research Institute. |
| 83,044 | ... | ... | ... | ... | ... | Forest Surveys (Imperial). |
| 46,33,826 | 50,72,459 | 48,23,239 | 50,86,644 | 47,69,521 | 45,59,603 | Madras. |
| 44,01,024 | 43,82,817 | 42,07,620 | 43,59,516 | 43,11,781 | 44,92,445 | Bombay. |
| 3,58,15,869 | 3,52,07,833 | 3,39,63,202 | 3,50,06,816 | 3,56,81,654 | 3,50,61,269 | Grand Total. |

Office Establishment, and undistributable and petty local items and revenues and charges, on Indore and Bangalore.....Excludes Home charges.
 Orissa.
 † Bengal.

Surplus of the Forest Department throughout India for the 30 financial years

(III) SUR

| Province. | Average of 1868-70 to 1873-74. | Average of 1874-75 to 1878-79. | Average of 1879-80 to 1883-84. | Average of 1884-85 to 1888-89. | Average of 1889-90 to 1893-94. | Average of 1894-95 to 1898-99. | 1899-1900. | 1900-01. | 1901-02. | 1902-03. | 1903-04. | 1904-05. |
|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|------------|-----------|-----------|-----------|-------------|-------------|
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Imperial* | -61,510 | -35,985 | -55,025 | -76,269 | -78,978 | -78,128 | -90,460 | -61,115 | -76,055 | -61,338 | -81,890 | -79,220 |
| Bengal† | 53,284 | 77,748 | 2,61,431 | 2,37,037 | 3,62,284 | 5,10,712 | 5,93,700 | 6,62,533 | 6,85,106 | 6,18,333 | 3,62,015 | 4,78,833 |
| United Provinces | 2,95,974 | 3,81,041 | 2,65,957 | 5,45,627 | 7,42,767 | 5,96,746 | 6,72,860 | 6,02,024 | 7,06,769 | 10,11,823 | 11,99,003 | 10,05,735 |
| Punjab | 1,41,908 | 1,48,410 | 1,96,096 | 2,67,578 | 2,54,043 | 3,89,236 | 1,89,810 | 4,68,499 | 5,09,223 | 6,23,312 | 5,01,332 | 8,62,059 |
| Burma | 4,91,451 | 6,16,696 | 9,75,844 | 11,78,894 | 33,06,271 | 44,91,900 | 53,64,610 | 53,99,727 | 82,27,481 | 38,48,790 | 49,16,131 | 65,12,832 |
| Bihar and Orissa | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Assam‡ | ... | 12,605 | 29,427 | 20,400 | 1,14,591 | 1,29,042 | 2,10,960 | 2,01,549 | 1,83,851 | 2,52,701 | 2,50,248 | 3,12,021 |
| Central Provinces and Berar, | 3,42,807 | 5,46,202 | 6,68,453 | 6,73,358 | 6,78,848 | 1,97,298 | 21,670 | 99,748 | 3,78,212 | 4,27,140 | 7,17,069 | 6,92,844 |
| Coorg | 52,807 | 42,296 | 40,922 | 32,117 | 76,120 | 51,310 | 63,180 | 66,681 | 87,909 | 1,01,293 | 1,31,840 | 1,09,267 |
| North-West Frontier Province, | ... | ... | ... | ... | ... | ... | ... | ... | 6,408 | 47,038 | 41,230 | 16,033 |
| Ajmer | -6,132 | -17,540 | -8,722 | -5,761 | 1,172 | -2,560 | -5,060 | -6,136 | -9,062 | -6,641 | 2,794 | 1,656 |
| Baluchistan | ... | ... | -4,033 | 5,157 | -21,454 | -18,178 | -11,620 | -12,298 | -9,708 | -3,904 | 3,334 | -2,117 |
| Andamans | 4,728 | 4,004 | 29,711 | 16,525 | 1,02,580 | 69,010 | 1,19,660 | 1,37,749 | 62,236 | 44,333 | 1,61,260 | 2,78,365 |
| Imperial Forest College and Research Institute. | ... | ... | ... | -28,349 | -43,387 | -62,080 | -70,310 | -67,541 | -72,745 | -63,056 | -56,301 | -57,667 |
| Forest Surveya (Imperial), | -11,011 | -63,271 | -40,808 | -24,271 | -23,823 | -31,636 | -33,560 | -33,684 | -33,257 | -30,951 | -33,594 | -23,229 |
| Madras | 1,46,408 | 11,413 | 1,85,360 | 2,32,360 | 4,29,215 | 6,04,232 | 6,48,760 | 6,24,739 | 8,33,876 | 7,78,267 | 9,06,797 | 8,43,118 |
| Bombay | 5,22,627 | 3,58,074 | 6,42,526 | 11,69,502 | 14,45,104 | 10,64,692 | 2,86,770 | 5,32,943 | 6,60,040 | 6,52,715 | 9,75,602 | 11,18,954 |
| GRAND TOTAL | 16,90,631 | 20,63,593 | 32,07,634 | 42,41,192 | 73,45,662 | 79,19,616 | 79,84,930 | 86,10,453 | 70,77,327 | 82,22,209 | 1,06,49,754 | 1,10,62,994 |

| Province. | 1917-18. | 1918-19. | 1919-20. | 1920-21. | 1921-22. | 1922-23. |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Imperial* | -36,612 | -83,150 | -1,08,250 | -1,41,871 | -2,19,208 | -4,06,941 |
| Bengal | 6,93,257 | 11,18,260 | 10,78,930 | 8,48,013 | 6,19,837 | 10,79,977 |
| United Provinces | 29,11,769 | 20,38,203 | 18,10,479 | 17,36,203 | 12,41,989 | 22,14,317 |
| Punjab | 9,59,728 | 3,58,371 | 14,20,758 | 2,29,309 | 6,15,102 | -11,62,428 |
| Burma | 68,74,320 | 68,36,870 | 93,97,062 | 1,10,08,040 | 1,20,33,693 | 89,71,803 |
| Bihar and Orissa | 3,62,909 | 5,13,914 | 3,10,658 | 2,21,484 | -94,292 | 1,64,373 |
| Assam | 6,23,329 | 8,01,757 | 6,59,873 | 5,05,343 | 3,05,516 | 5,99,210 |
| Central Provinces and Berar | 15,94,369 | 14,72,874 | 21,70,493 | 16,60,925 | 14,17,872 | 16,72,562 |
| Coorg | 2,58,782 | 2,52,301 | 4,40,481 | -39,407 | 1,03,086 | 3,56,646 |
| North-West Frontier Province | 1,83,836 | 1,78,065 | 1,61,088 | -2,34,418 | -1,74,531 | 1,15,276 |
| Ajmer | 1,229 | 8,772 | -12,368 | 10,695 | -508 | 4,198 |
| Baluchistan | -12,065 | -3,679 | -7,377 | -6,217 | -36,046 | -21,529 |
| Andamans | 3,35,932 | 5,71,557 | -1,70,696 | -7,03,556 | -7,86,920 | -2,17,157 |
| Imperial Forest College and Research Institute | -2,81,890 | -2,88,965 | -3,10,195 | -4,44,836 | -7,08,707 | -5,54,823 |
| Forest Surveya (Imperial), | -56,597 | -59,110 | -59,953 | -90,448 | -1,07,113 | -1,19,935 |
| Madras | 24,38,140 | 16,08,940 | 25,40,801 | 8,50,760 | -3,46,185 | 4,89,496 |
| Bombay | 29,58,308 | 26,21,834 | 26,76,766 | 15,93,583 | 24,69,617 | 20,23,010 |
| GRAND TOTAL | 1,98,12,194 | 1,70,42,726 | 2,19,12,540 | 1,77,23,588 | 1,74,64,193 | 1,59,02,091 |

* Includes pay of Inspector-General of Forests, Assistant-Inspector-General of Forests.
† Includes figures up to 1910-11 for districts subsequently transferred to Bihar and
‡ Includes figures up to 1910-11 for Eastern Bengal districts subsequently transferred.
(c) Includes Federated Shan States.

MENT XIX—*concl.*

from 1899-1900 to 1928-29 and the average of 6 quinquennial periods from 1869-70 to 1898-99.

PLUS.

| 1905-06. | 1906-07. | 1907-08. | 1908-09. | 1909-10. | 1910-11. | 1911-12. | 1912-13. | 1913-14. | 1914-15. | 1915-16. | 1916-17. | Province. |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---|
| Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | |
| -76,512 | -95,472 | -92,588 | -95,994 | -93,700 | -83,944 | -84,034 | -91,325 | -87,825 | -87,481 | -86,045 | -78,702 | Imperial.* |
| 5,25,033 | 4,32,478 | 4,84,256 | 6,00,861 | 4,89,541 | 5,24,159 | 4,16,068 | 19,39,807 | 9,75,954 | 6,83,561 | 5,51,975 | 7,19,180 | Bengal.† |
| 10,23,216 | 11,95,013 | 12,15,792 | 9,52,970 | 10,91,586 | 11,40,501 | 16,52,487 | 19,14,699 | 18,16,473 | 8,17,495 | 11,72,524 | 23,05,017 | United Provinces. |
| 5,17,989 | 4,60,881 | 2,80,763 | 4,37,165 | 3,64,881 | 4,77,440 | 5,44,931 | 4,39,857 | 4,35,766 | 5,48,703 | 6,03,405 | 7,53,189 | Punjab. |
| 63,81,606 | 61,52,766 | 51,12,457 | 54,71,785 | 56,74,459 | 62,27,318 | 58,36,432 | 67,63,809 | 71,50,529 | 50,27,247 | 43,12,976 | 74,42,943 | Burma. |
| ... | ... | ... | ... | ... | ... | 1,06,297 | 63,064 | 1,86,087 | 1,65,408 | 1,56,177 | 81,109 | Bihar and Orissa. |
| 5,12,166 | 6,12,732 | 6,30,071 | 5,55,010 | 5,22,101 | 8,13,295 | 9,05,307 | 3,33,180 | 1,87,729 | -65,462 | 2,99,898 | 4,72,588 | Assam.‡ |
| 11,41,978 | 10,58,251 | 7,06,721 | 3,24,555 | 4,91,458 | 5,24,694 | 7,11,475 | 12,25,080 | 12,33,324 | 13,35,960 | 15,43,926 | 16,02,893 | Central Provinces and Berar. |
| 1,49,671 | 1,33,054 | 1,69,037 | 1,24,735 | 1,05,907 | 1,68,376 | 1,73,996 | 1,20,108 | 1,50,713 | 23,404 | 2,72,532 | 3,26,823 | Coorg. |
| 83,271 | 89,564 | 1,50,090 | 41,369 | 95,914 | 1,32,850 | 68,735 | 1,15,010 | 1,35,718 | 1,12,420 | 82,020 | 1,22,915 | North-West Frontier Province. |
| -2,129 | 1,620 | 11,676 | 7,599† | 4,718 | 13,928 | 4,018 | 6,882 | 10,302 | 9,437 | -1,707 | -5,362 | Ajmer. |
| -4,262 | -5,127 | -6,429 | -13,251 | -7,820 | -3,175 | -8,830 | -6,368 | -5,323 | -6,012 | -6,362 | -6,632 | Baluchistan. |
| 2,46,526 | 3,11,891 | 62,555 | 21,077 | 65,818 | 1,89,810 | 2,50,428 | 1,91,784 | 1,71,135 | 81,192 | 3,032 | 2,21,059 | Andamans. |
| -77,569 | -1,32,907 | -1,51,901 | -1,78,511 | -1,91,205 | -2,15,103 | -2,57,691 | -2,60,834 | -2,92,582 | -3,22,474 | -2,71,523 | -2,97,299 | Imperial Forest College and Research Institute. |
| -39,044 | -80,389 | -27,060 | -39,128 | -41,062 | -41,140 | -38,708 | -35,809 | -37,743 | -42,353 | -48,663 | -47,407 | Forest Surveys (Imperial). |
| 7,01,002 | 8,10,009 | 11,12,973 | 9,78,658 | 6,38,746 | 6,54,610 | 7,54,039 | 9,61,991 | 12,64,503 | 10,50,852 | 11,79,520 | 17,53,448 | Madras. |
| 18,58,900 | 14,32,298 | 16,90,750 | 15,43,483 | 16,94,568 | 16,47,807 | 16,66,133 | 23,00,064 | 25,13,279 | 21,92,317 | 20,59,225 | 29,54,496 | Bombay. |
| 1,24,16,072 | 1,24,27,687 | 1,18,50,046 | 1,07,30,765 | 1,11,05,140 | 1,21,61,431 | 1,21,10,793 | 1,50,01,999 | 1,57,53,090 | 1,15,03,334 | 1,25,23,760 | 1,83,18,047 | GRAND TOTAL. |

| 1923-24. | 1924-25. | 1925-26. | 1926-27. | 1927-28. | 1928-29. | Province. |
|---------------|-------------|-------------|-------------|-------------|-------------|---|
| Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | |
| -1,14,538 | -1,33,495 | -1,18,903 | -1,23,858 | -61,661 | -59,861 | Imperial.* |
| 10,18,643 | 10,53,055 | 15,95,452 | 13,69,080 | 10,47,027 | 14,36,166 | Bengal. |
| 80,05,334 | 32,37,982 | 27,30,035 | 21,97,801 | 32,07,880 | 29,80,675 | United Provinces. |
| 14,70,496 | 11,12,524 | 14,10,566 | 12,04,345 | 2,36,848 | 10,81,706 | Punjab. |
| (a) 91,00,240 | 1,00,49,511 | 1,36,83,575 | 1,40,53,176 | 1,85,69,910 | 96,75,372 | Burma. |
| 2,78,428 | 2,79,871 | 3,62,968 | -1,39,817 | 2,75,386 | 2,48,788 | Bihar and Orissa. |
| 8,14,447 | 11,47,903 | 14,71,157 | 16,85,967 | 21,67,693 | 16,45,507 | Assam. |
| 20,63,821 | 20,60,769 | 16,41,680 | 16,72,635 | 15,78,692 | 17,97,057 | Central Provinces and Berar. |
| 1,85,319 | 3,09,270 | 2,83,123 | 1,78,375 | 2,43,186 | 2,00,503 | Coorg. |
| 74,765 | 61,054 | 1,00,686 | 1,50,447 | 65,286 | -5,558 | North-West Frontier Province. |
| 5,968 | 10,937 | 17,598 | -12,794 | -6,339 | 11,569 | Ajmer. |
| -9,037 | -9,885 | -7,737 | -4,480 | -4,152 | -13,453 | Baluchistan. |
| -2,84,632 | -4,23,093 | -2,44,034 | -40,234 | -32,623 | 1,71,779 | Andamans. |
| -6,08,303 | -7,23,786 | -7,08,636 | -6,22,541 | -8,19,107 | -8,35,786 | Imperial Forest College and Research Institute. |
| -95,914 | ... | ... | ... | ... | ... | Forest Surveys (Imperial). |
| 7,81,781 | 4,97,223 | 3,47,281 | 5,86,856 | 5,74,837 | 15,95,270 | Madras. |
| 27,48,580 | 29,25,647 | 33,20,412 | 32,06,904 | 20,82,313 | 28,50,590 | Bombay. |
| 2,04,74,950 | 2,14,76,799 | 2,59,07,623 | 2,63,58,415 | 2,56,21,432 | 2,27,47,574 | GRAND TOTAL. |

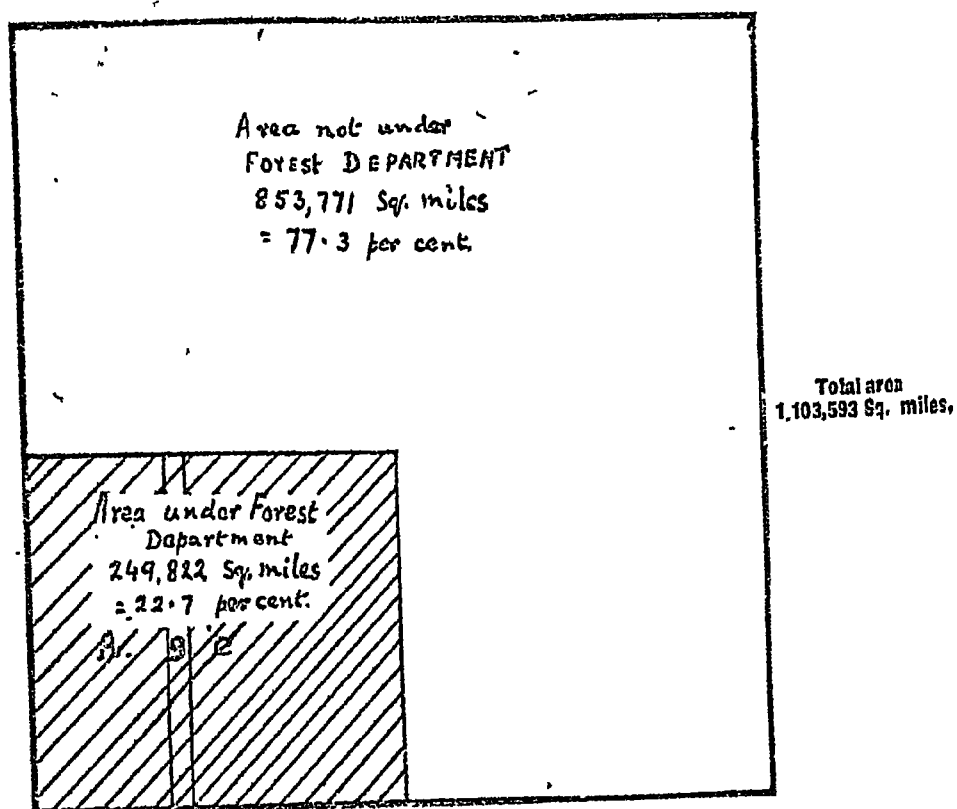
Office Establishment, and undistributable and petty local items and revenues and charges on Indore and Bangalore.....Excludes Home charges.

Orissa.
Bengali

MGIPC-S5-III-2-22-14-1-31-245

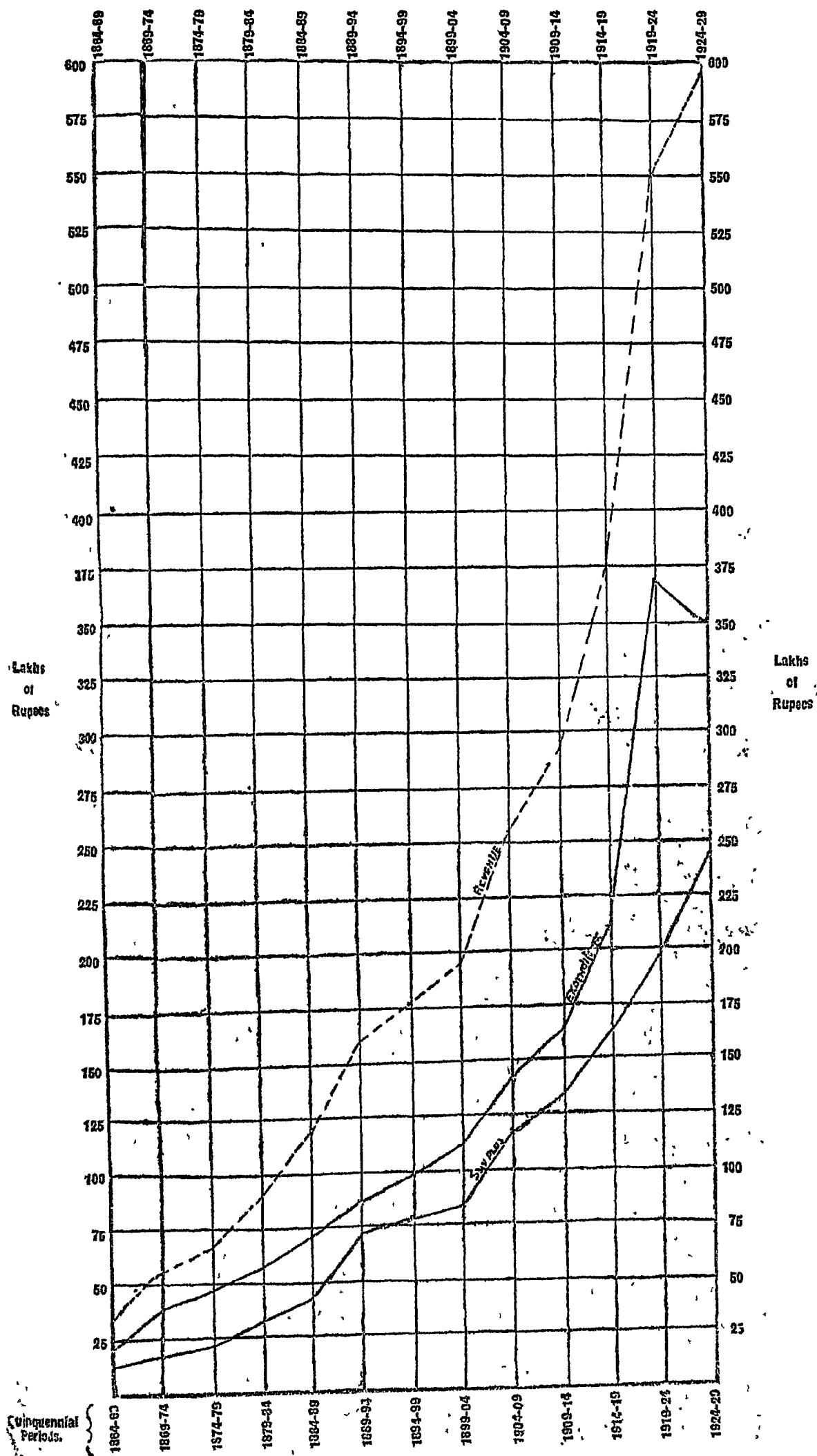
STATISTICAL DIAGRAMS RELATING TO FOREST ADMINISTRATION IN BRITISH INDIA.

1. Area under the control of the Forest Department compared with total area of British India (including the Sikh States).



A. Reserved Forests. 106,840 Sq. miles.
B. Protected do. 6,308 do.
C. Unclassed do. 135,665 do.

II.—GROWTH OF FOREST REVENUE AND EXPENDITURE BY QUINQUENNIAL PERIODS SINCE 1864-69.



**DIAGRAM SHOWING
ANNUAL FOREST REVENUE, EXPENDITURE & SURPLUS,
For the 10 years 1919-20 to 1928-29.**

